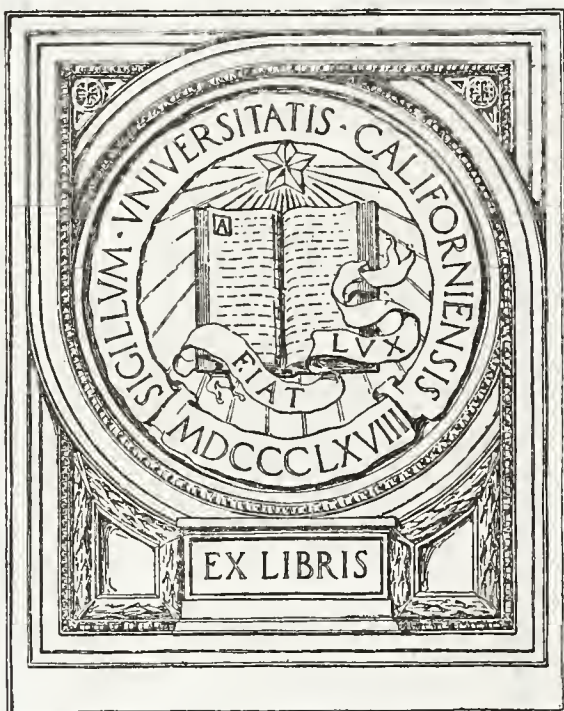



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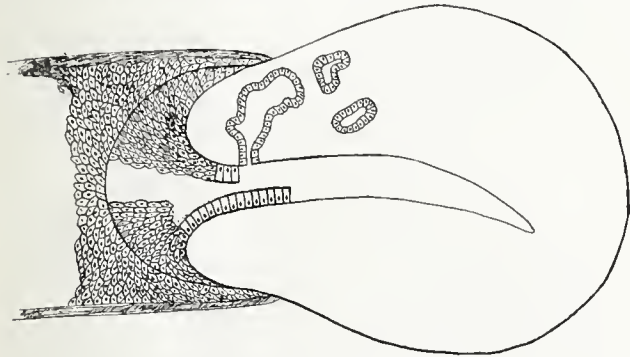
No. 1

Original Articles

THE HISTOPATHOLOGY AND TREATMENT OF CERVICITIS*

DEWELL GANN, JR., F. A. C. S., F. R. C. S.
(Edin.)

There has been no small amount of material in recent literature concerning diseases of the cervix, yet it seems to me more or less con-



Pseudo erosion

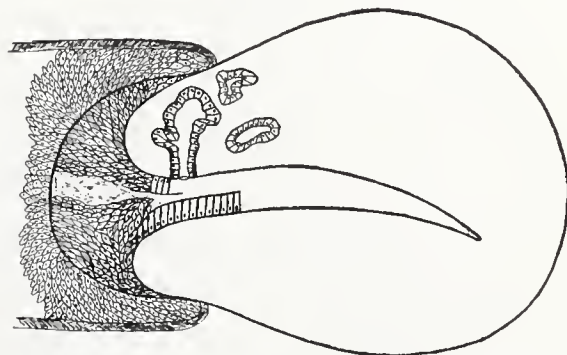
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fusion exists regarding the treatment of its inflammatory reactions and for this reason I am going to take, at the request of a member of the Program Committee, a few minutes of your time to express my views on this subject. In this brief space I shall not discuss many of its phases, but attempt to cover as much of the histopathology and treatment of cervicitis as time will permit.

In 1921, I became interested in the cervix as an etiological factor in the production of unilateral and bilateral pain in the lower abdominal quadrants. This interest was aroused through the fact that of forty-one patients whose tubes or ovaries, or both, had been removed by different surgeons in one of our local institutions, for pain of this character. In reply to a questionnaire, twenty-seven reported that they had received no benefit from the operation performed. Naturally, one would

think the cause for such pain was not in the organs removed, yet the site of trouble must be near them, and I believe the cervix is the most likely focus.

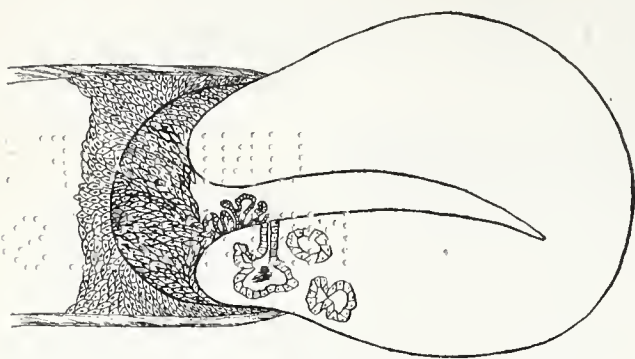
When recalling the embryology of the gynec system we remember that during the early part of life in utero we find columnar epithelium predominating throughout. By the sixth month the squamous epithelium, growing from below upward has replaced it and there is a line of sharp demarcation at the junction of the canal and the portio, namely the external os. Occasionally, however, the columnar epithelium is seen to push out onto the portio of either the anterior or the posterior lip, in such a manner as to produce a reddened raw area resembling a simple erosion, when in reality it is a congenital anomaly and has nothing to do with the reaction of the cervical tissues to the invasion of bacteria. This condition is a pseudo erosion and should not be confused with the simple erosions seen in what I have chosen to call the cervicitis of childhood. The latter condition is a much more common malady than has ever been suggested and is responsible for more complaints and conditions than it has been accredited with. Further, though the hymen is intact, it is a condition that should be more generally recognized and sought for during or shortly after puberty, as, not only the cause of unilateral or bilateral pain in the lower quadrants, but as the causa-



Simple erosion

2

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

*Papillary erosion*

3

tive factor in acute pyelitis, et cetera, ad infinitum.

Because of its histological structure the cervix is much more than a passive communicating channel between the vagina and uterine cavity as suggested by Sturmdorf. It is the barrier supreme to the invasion of bacteria to the gyneic system and has rightly been termed the tonsil of the uterus. Its tissues react to the invasion of bacteria very much in the same manner as other soft parts, the invasion being characterized by the usual symptoms of acute inflammation.

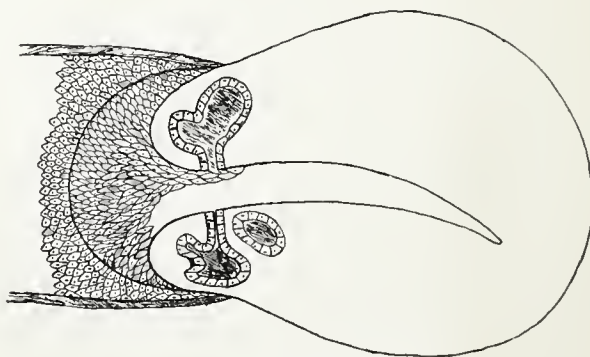
Acute lesions heal rapidly and soon become chronic when various inflammatory changes may be seen throughout the organ as a whole. Shortly following the acute lesion characterized by swelling and engorgement there is an abnormal multiplication of the columnar cells first of the cervical mucosa. With this hypertrophy and hyperplasia something must happen just the same in the cervix as in other tissues when inflammation occurs. Rubor, calor, dolor and tumor are present in the cervix when invaded by an organism, be it strep, staph, colon, gonococcal or otherwise, in the same degree of intensity as seen in other soft parts reacting to the same bacterium.

In hyperplastic conditions in any glandular structure the new cells follow the lines of least resistance in their processes of extension. In the cervix we have chosen to describe four such lines. The first is from the canal to the portio. The columnar cells pass from the canal onto the portio in such a manner that in their downward growth the squamous cells covering the vaginal portion of the cervix are lifted and shed. This is the first line of least resistance. Clinically at this time the cervix presents a reddened area of variable dimensions about the external os that is covered with a thick, mucoid material. Blood vessels shine

through and bleed freely when touched. This condition is spoken of as *simple erosion*. At this time the pathological process no longer remains within the endocervix; hence, is not the term endocervicitis a misnomer after a simple erosion is demonstrable and should it not be more restricted in its use?

On continuation of the inflammatory process there is also a continuation of the hypertrophy and hyperplasia of the columnar cells, this growth taking place in an exophytic manner. The increased number of cells must find a place of abode and the microscope shows them in tufts or papillae, on the portio, producing the well-known *papillary erosion*, the second line of least resistance.

If the process continues and the stimulation is increased the new columnar cells do not further pile upon the portio, but show a growth spoken of as endophytic in type. During this stage the columnar cells are seen to multiply within the luminae of the racemose glands and the glands push out into the musculo-fibrous structure of the cervix, thus producing the well-known *follicular erosion*, the third line of least resistance. At this time cell edema is quite marked, the ostiae of the glands are closed and their luminae filled with mucous, the first step towards the formation of the follicles of Naboth, a pathology comparable to that seen in the formation of a sebaceous cyst. A similar cystic condition is seen during the healing process when the squamous epithelium grows over the ostia of the gland and the treatment has not been such as to arrest the continuation of the inflammatory process in the duct and in the luminae of the gland. A cervical polyp is a hypertrophy of the endocervical mucosa and seldom if ever, becomes malignant. This completes the histopathology of the erosions of the cervix. However, if the inflammatory process is not ar-

*Folliculitis*

4

*Folliculitis-Adenoma.*

5

rested at this time the endophytic growth of cells continues and the proliferation is so great that the cells are seen to pass from the canal to the portio forming an adenoma. This condition is the last stage of the inflammatory process and is the ideal background for the development of carcinoma. A break in the basement membrane with riotous cell growth is sufficient to produce a most serious situation, that of carcinoma of the cervix.

The treatment therefore, in all cases of endocervicitis and cervicitis must depend upon the extent of the lesion, the nature of the infection and associated pathology and be varied as much as possible according to the age and period of nubility of the patient. Pseudo erosion as has been suggested under the caption of embryology is a congenital anomaly and as such requires no treatment. It is relatively benign and should heal and become covered by squamous epithelium at the time of puberty or soon thereafter the result of increased ovarian function.

Endocervicitis, the result of lacerations from childbirth, irritations from pessaries, attempts at abortion, intra-cervical cauterizations and strong chemical douches, in so long as the process is limited to the mucosa may in most instances be eradicated by local applications and ordinary office treatment.

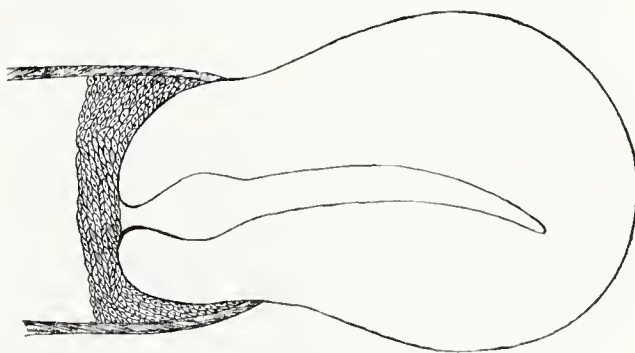
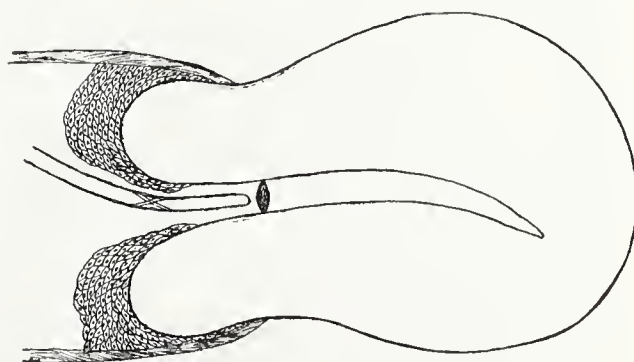
Acute cervicitis should be treated by bisecting the anterior and posterior lips of the cervix with the cautery knife.

Simple and papillary erosions should respond to cautery stripes as will be shown in another slide. Follicular erosion or folliculitis require a quartering of the cervix for their cure. The heat brings about a cessation of the cellular proliferation within the luminae of the gland. Cyst formations are treated by stab punctures or stab incisions evacuating the content of the cyst. Contrary to the custom

of recurrence, unless the cyst wall is removed, as in sebaceous cysts, this form of cyst formation is curable by simple puncture. It is in this type of erosion that there is a diversity of opinion regarding the treatment. Some of our leading writers assert that the cautery is not sufficient to establish a cure if the process has extended beyond the papillary type of erosion. However, others, of equal repute, claim that the cautery is sufficient for its cure. Diathermy is at present receiving quite a good deal of attention in this connection and radium, though more expensive is advocated by the select few.

After the adenomatous stage has been reached, in my opinion, all cases should be treated surgically, if for no other reason, to remove the tissue for biopsy and establish the presence or not of an early carcinomatous change. Cancer of the cervix, in my judgment should be treated locally with radium, followed by deep x-ray therapy of the pelvis, with the view of preventing metastases.

As can be seen in the slide here the peri-uterine and peri-adnexal lymphatics are arranged in such a manner as to produce a multitude of symptoms when they become invaded. Pain in the lower quadrants, backache, menorrhagia, dysmenorrhea, amenorrhea and the omnipresent leucorrhea are often found.

*The healing process*

6

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DISCUSSION

DR. J. B. WHARTON, El Dorado: It is our practice in our clinic here to use this method very extensively with very satisfactory results. I wish to thank the doctor very much for this valuable paper.

DR. H. W. E. WALTHER, New Orleans: As a visitor to you today, I have been given a treat in listening to this wonderful exposition of original work by Dr. Gann. He has very modestly said that, so far as he knows, this work of histopathological research on the cervix is something original with him.

While I am not a student of gynecology, my work in urology in the last few years has carried me into the field of gynecological urology, and I am chiefly interested, of course, in this process from the standpoint of the invasion of the gonococcus into the cervix. Still I can appreciate what he says about the steps through which this

histopathology carries our patients, particularly those women who are not given a thorough examination and who are neglected. That we might go (if I understood the doctor correctly), from one inflammatory process into another by stages and find finally even the most simple infiltrating processes to end in malignancy, is interesting and valuable.

I have enjoyed the paper, as I said, very, very, much. Whenever malignancy is spoken of in a gathering of medical men, we certainly all must prick up our ears, especially if some one is giving us a new plan to recognize lesions in the human organism in what we might term the primary stage. The campaign against cancer must proceed, the battle is not won. We must do everything we can to fit ourselves to recognize any chronic inflammatory processes that might be the forerunners of malignancy.

In closing, I would just like to mention the change of attitude, or the change of mind, of the surgeon nowadays and the man doing surgical work, in relation to making a diagnosis of so-called neoplasms or suspicious chronic infiltrations. You can recall very well that for many years past we had had the technic of biopsy condemned (of obtaining with a knife or with a cautery at the time of the examination, or in the preliminary steps of the surgical procedure, specimens for microscopic study, whether it be submitted to frozen section or to the more elaborate process of pathological study.) As I say, we have been in the past, taught that that was bad surgery and that we were opening up channels that would liberate cells and disseminate cancer broadcast. The national attitude in medicine and in surgery is changing and I believe for the better. We have never had any definite proof, no one has ever furnished to my understanding any definite proof, that where a biopsy specimen was obtained in an intelligent fashion that anyone ever spread anything. You cannot tell what you are dealing with without these biopsy specimens. Your technic at the time of operation as well as the outlook of prognosis that you might offer the patient later, are certainly given in the most blind fashion unless you obtain these biopsy specimens.

I think this Society is to be congratulated, and the State of Arkansas is highly honored, for having such a man as Dr. Gann in their midst who, I feel, through his work on this subject that he presented to us today, is going to receive national recognition. (Applause).

DR. BERTRAM L. WARE, Greenwood: There are two questions I want to ask Dr. Gann. One is, in your work, how long do you estimate it is before you get a malignancy? The next question, what per cent of these cases do you find that show a positive Wassermann?

DR. A. F. HOGE, Fort Smith: There is one point I should like to emphasize, and I feel should be emphasized in Dr. Gann's excellent paper, and that is the fact that infections in cervixes are often sources of focal infection, or foci of infection, and responsible for a certain percentage of cases of arthritis, pyelitis and things of that sort. When we have to deal with such conditions, the possibility of a cervical infection, even in the virgin, should not be overlooked.

DR. ANDERSON WATKINS, Little Rock: The paper with the accompanying slides illustrate the fact that we may have in the proliferation of cells of either the squamous or columnar type of cells various inflammatory lesions leading perhaps to the adenomatous type which, in time, becomes malignant.

I remember seeing a case of adenomyoma which had been treated with radium, and in which there was a vaginal metastasis, unknown entirely perhaps, to the man who was using the radium, and he was a very skillful man.

I don't know of one symptom of carcinoma of the cervix, or in the body, which presents itself, when there is a symptom so far as lies within the productivity of the woman, which is not the symptom of a case which is too advanced for cure. Discharge, hemorrhage, pain, loss of weight, and odor, all of these always impress me with the fact that these women come too late.

Aside from the question of inflammation of the cervix, I believe when a woman becomes 40 or beyond, she should have a systematic examination, say, every six months or yearly or biannually by a competent gynecologist. When there is hemorrhage, leukorrhea, odor, pain and loss of weight, it indicates that it is a cancer which is beyond recovery.

DR. GANN, in response: I have something like sixty slides covering this subject and I only brought twenty with me. Being allotted twenty minutes, I figured possibly that I could show twenty slides in that time. This one I did not finish with accounts for the fact that these people do not get well immediately after treatment, for the same reason when a patient has an inflammatory reaction about the finger that advances to such a degree that we have a so-called lymphangitis or lymphadenitis, doesn't get well immediately. The finger is well on the road to recovery long before the pain and discomfort to the muscles in the arm or the adenopathy disappears. These lymphatics about the uterus are responsible for the fact that these people don't get well immediately after treatment. They are responsible for the fact that lots of your patients who have cervicitis, bringing out a point made by Dr. Hoge, of Fort Smith, are potentially a focus of infection, so to speak, and have arthritides, etc. We must give this condition time to disappear after the cure of the cervicitis, which it will do. They continue to have pain in the side, dysmenorrhea, amenorrhea, hemorrhagic, etc., from a mild metritis.

I thank Dr. Wharton and Dr. Walther very much for their remarks. In reply to Dr. Ware, will say that we don't know when malignancy will take place in an inflammatory cervix. I believe this, that after a simple erosion and a papillary erosion has advanced from the follicular into the adenomatous stage, that we had better treat these people. Just what day malignancy will occur, there is no way of determining that I know of, but, if we get rid of an adenomatous cervix, we shall prevent lots of cases of carcinomatous cervixes. Why? Because carcinoma is usually, in fact, is said by some very good writers always to be something else before it is carcinoma. Therefore, if we remove it in the inflammatory stage, we may prevent carcinoma.

In only one case of this type have I found a positive Wassermann where I suspected malignancy.

Dr. Watkins made some very timely remarks. While I was with Dr. Howard Kelly, of Baltimore, I had a series of several patients that gave me a history of having bleeding in carcinomatous cervixes before they had a discharge. I then developed their history more carefully from that point on and in a series of 273 cases I was able to show Dr. Kelly that, by carefully taking the history of these people in almost every case, bleeding preceded discharge and, if I had the time I could show you from a histological standpoint why this occurs. I thank you very much.

MORTALITY IN APPENDICITIS—ITS CAUSES AND PREVENTION*

A. F. HOGE, M. D., F. A. C. S., Fort Smith

A few years ago I thought that anybody reading a paper on appendicitis should preface his remarks with an apology for adding to the already voluminous literature on the subject. However, after hearing Willis (1) read his paper before the Congress of Surgeons at Philadelphia, I concluded that a study of our work and the results attained in the treatment of appendicitis at St. Edwards Mercy and Sparks Memorial Hospitals would be well worth-while. Willis, in his paper, quoted from the Bureau of the Census statistics which tend to show that the mortality from appendicitis, contrary to popular belief, was on the increase. He concluded that a commission should be appointed to study the reasons for this increase and to propose a standardized treatment.

The Mortality Statistics of the Bureau of the Census for 1924—the latest available—show a steady increase in deaths from appendicitis per hundred thousand population in the registration area. In 1900 the death rate from this disease was 9.7 per hundred thousand; in 1910 it had risen to 11.4; in 1920 to 13.4; and, in 1924 the death rate was 14.9, the highest in more than two decades. Bower (2) (Jour. A. M. Assn.) states that in Philadelphia, between the years 1915 and 1923, there was an increase of 18 per cent in the death rate from appendicitis. This increase is not in the United States only. The Registrar General's Office in England also shows an increase. Opinions differ as to the cause of this increased mortality. Rowntree, quoted by Bower, feels that the increase shown in the Registrar General's statistics is due to faulty surgical management, inexperienced operators, etc. Willis implies the lack of standardized treatment or management. Bower, from a study of the cases occurring at the Samaritan Hospital in Philadelphia, concludes that the time element is the all important factor. He says, "Of the cases that recovered, the duration from the time of onset to the time of operation was 69.1 hours. The average time between onset of symptoms and operation, in the perforated cases, was 107.3 hours. 45 per

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

cent of their acute cases had perforated. 73 per cent of their fatal cases had perforated."

A factor, in the increased number of deaths, that has not been considered by any of the writers quoted, and one that may well be considered, is the question of increased incidence of appendicitis. Figures on this are not available, so far as I know. However, my personal impression is that appendicitis is far more frequent now than it has been. It is interesting to note that in the large general hospital of Cairo, Egypt, containing some 750 beds, there were only five cases of appendicitis reported in 1926. This curious fact will doubtless stimulate speculative thought. Why should appendicitis be so frequent in the United States and in Europe, and so rare in Egypt?

The study of our cases as they occurred in Fort Smith, has convinced me that Willis, Rowntree and Bower are each, in a measure, right in the conclusions they have reached, but that the keynote to the solution of the problem, lies in the time factor. Cases operated upon, before perforation or gangrene occurs, almost invariably get well.

There were 687 cases of appendicitis treated in St. Edward's Mercy and Spark's Memorial Hospitals, from April, 1921 to April, 1926. Of these, 435 were classed as acute and in this group there were 33 deaths, a mortality of 7.5 per cent. There were 252 chronic cases, with one death, a mortality of .4 per cent. In these fatal cases, the duration from onset of symptoms to time of operation, averaged 136.8 hours or 5.7 days. One case that had not been operated upon, died of general peritonitis, six hours after admission, leaving a surgical mortality of thirty-two cases. Of these, 22 had ruptured before admission. There were nine fatal cases of definite appendiceal abscess, in which drainage only, was done—no attempt being made to remove the appendix. These died of sepsis and general peritonitis. Two cases died of post-operative hemorrhage. These were subacute cases having tubal and ovarian pathology in which a tube and ovary were resected, in each case, in addition to removal of the appendix. The site of the bleeding is not known, as no attempt was made to combat the hemorrhage at its source, nor was blood transfusion done in these cases. One death occurred from sepsis following a breaking down of the incision after a severe coughing spell. Eventration of the intestines occurred and necessitated secondary

operation, for reclosure, in which a rent in the gut also, was repaired.

Analysis of the histories of the remaining cases shows that they fall into two groups. A composite history of group one would read somewhat as follows: Patient took sick from two to nineteen days prior to admission, with pain in the abdomen, followed by tenderness and rigidity, nausea and vomiting, and perhaps fever. The doctor was called, and a diagnosis of appendicitis was made, and operation advised, but this latter the patient refused to consider, until conditions had grown worse. Perforation or appendiceal abscess or peritonitis occurred, and then the patient was brought to the hospital, with one of these conditions. A composite history of group two would read much as follows: "Patient took sick from two to five days before admission, with pain in the abdomen followed by the other symptoms and signs of appendicitis. The patient's doctor made a diagnosis of "acute indigestion," "upset stomach" or "malaria." After a few days, when conditions grew worse, the diagnosis was changed to appendicitis, and the patient was brought to the hospital, with a ruptured appendix and perhaps a general peritonitis.

Twenty-one doctors had charge of the cases studied in this series. The mortality in individual doctor's series varied widely—from 0 to 50 per cent. One doctor, who may be classed as an occasional operator, had four cases with a mortality of 50 per cent. Each of these cases developed in his own practice, and, in each, operation was delayed until perforation or peritonitis occurred. One of the surgeons who had thirty-six cases in this series had a mortality of 11.4 per cent. This particular surgeon does not employ drainage. The higher mortality of the occasional operator has, of course, raised the percentage mortality in the group as a whole.

It may be concluded from the study of the cases in the series here reported, that the majority of the fatal cases were due: First—to delay in diagnosis; Second—to delay in operation after the diagnosis was established; Third—to, in a few cases only, faulty surgical management. The number of fatalities due to faulty surgical management would be increased, if we are agreed that patients having free pus or perforation should be drained. It is evident, therefore, that in order to obtain a reduction in our mortality from appendicitis, we must have: First—Earlier Diagnosis;

Second—Proper Surgical Intervention; Third—Proper Surgical Management.

Typical cases are and they should be easily recognized. The onset with sudden pain throughout the abdomen or, perhaps, in the epigastrium, followed in a short time by localization in the right lower abdomen, with tenderness and rigidity over the right lower rectus, and, later, nausea and vomiting, increased pulse rate, rise in temperature, and increase in leucocyte count, are almost unmistakable signs. However, few cases present all the features of this type. One must be constantly on the alert for atypical cases which may be pitfalls for the unwary. A few illustrative cases may be detailed briefly:

Case 2223. A boy aged 11 years took sick, July 1, with "stomach ache" characterized by paroxysmal cramping pains throughout the abdomen, but more marked in the right lower abdomen. These continued until July 4, when he was first seen by the doctor. There had been no nausea, vomiting or fever. The temperature was 98.6; pulse 80; respiration 18. General examination was negative. The abdomen was soft and easily palpable except that exactly over McBurney's point there were tenderness and muscle guarding on palpation. Immediately above and below this point, there was no tenderness or rigidity. The boy was admitted to the hospital for operation. The leucocyte count, one hour previous to operation, was 8,000 with a polynuclear count of 74 per cent. At operation the appendix was found to be bound down with adhesions; it was full, tense, swollen and bulbous in the distal half, distended very much like an over-stuffed wienie. There was a fecal concretion in the proximal end. On section, about a drachm of stinking pus was found in the lumen distal to the fecal concretion. Imagine what might have happened in this case had the doctor waited for rise in temperature and pulse rate, or rise in leucocyte count, before making a diagnosis and operating.

Case 3935. A. J. P. Male; glass blower; aged 52; was first seen by the doctor May 20, 1927 at 1:30 p. m. and he gave the following history: The preceding night he had eaten some meat loaf which, he felt, disagreed with him. His wife also had eaten some of the meat loaf and she felt the worse for having done so. At 10:30 a. m. he stopped work and went home sick with extreme prostration and profuse clammy perspiration. He felt that if his bowels moved he would feel all right. He

complained of a numbness in the genitalia—"His privates felt dead." When seen at 1:30 p. m. his temperature was 98; pulse 50, and he had the appearance of being very sick. The abdomen was soft and flaccid. There was no tenderness or pain. A diagnosis of ptomaine poisoning was made and Epsom salts prescribed. At 3 p. m. patient had first pain in the abdomen. It was severe and it persisted for one hour and then subsided, and he took a nap. When seen again, at 5:30 p. m. the bowels had not moved. There was general abdominal rigidity, and tenderness over McBurney's point. The temperature was 99 and the pulse 72. The diagnosis was changed to appendicitis and the patient sent to the hospital. On admission, the leucocyte count was 16,400. Operation was done at 9 p. m. The appendix was gangrenous and there was a large perforation at the base. There was considerable free pus in the abdomen, and a large quantity of fluid in the rectal pouch. The fluid escaped when a split rubber tube was being inserted through a stab wound above the symphysis into the rectal pouch. Patient made an uneventful recovery. This case presents an atypical onset, in that there was no pain for several hours after illness had begun. However, after the lapse of several hours, the patient suffered pain, but only for one hour, at which time the perforation probably occurred. This patient had had a similar but milder attack, while in a neighboring city, about a year previous to the illness on which we have expatiated. The attending physician was unable to make a satisfactory diagnosis. On return of A. J. P. to Fort Smith, a general examination was made including gastric analysis, a gastro intestinal x-ray study and a study of the urinary tract with negative results.

Case.....: J. W., a contractor, aged 45, was taken sick the evening of April 22, with a hurting in his back. He was a very strong robust man, who prided himself upon his physique. He had formerly done a great deal of heavy manual labor, but had not engaged in work of this type during the ten years immediately previous to the evening on which he complained of his back. The day he took sick he became impatient with some workmen and decided to "show them what a day's work was," so he shoveled gravel all day. That night the hurting in the back developed. Three years previous to the trouble in his back, he had passed blood in his urine several times

over a period of about two weeks. There had been no trouble of this sort since that time. Examination showed a well-developed, rather obese man. Head, neck, heart and lungs were normal. The abdomen was full, rounded, soft and there was no tenderness or rigidity. When the patient's abdomen was being examined he raised the question of appendicitis, saying that he rather feared it, as a relative of his had died of that trouble. Deep palpation of the abdomen revealed not the slightest tenderness or rigidity. The temperature was normal; the pulse 70. The following morning the patient felt better. At this time urinalysis was done with negative results. The leucocyte count was 6000. The temperature and pulse were normal. The following morning, the doctor, upon calling to see the patient, was advised by the patient's daughter that her father felt much better and had gone to work. That night, the hurting in his back was more severe and there was a suggestion of induration or a mass in the right lumbar region. The temperature and pulse were normal. The following day there was a definite mass in the right flank; the temperature was 99.6 and the pulse 90. The leucocyte count was 8200. The diagnosis was changed to appendicitis with abscess, and operation was performed. At operation the appendix was found to be retro-cecal in the midst of an abscess containing a large amount of stinking pus. The appendix was removed and two large split rubber drainage tubes inserted. The patient died of general peritonitis on May 5. In this case, we have a patient who presented not one cardinal clinical symptom, nor one of the physical signs of appendicitis. Further, he presented a history of very hard physical labor immediately preceding illness and a history of passing blood in the urine a few years previous, all of which served as a "red herring across the trail."

To summarize—the diagnosis should be based not upon the completely classical picture or type of appendicitis, but upon the presence of one or more of the clinical symptoms, and one or more of the physical signs, provided other causes of the symptoms and signs can be ruled out. It is doubtful whether an early diagnosis in the completely atypical case, such as detailed in the latest history, can be made.

Proper Surgical Management: It is evident from the study of our cases, and the study of Bower in Philadelphia, that early operation

is the *sine qua non* for success in treating appendicitis. In our experience the patients who are operated upon, before perforation occurs, get well. The operation should be done by a skilled surgeon or by a surgical team, in a well equipped and a well conducted hospital, where all the resources for safeguarding the patient, are available. An operation for appendicitis may be a very simple affair, or it may be, and it often is, one taxing the resources of the most skillful. There may be times when, because of the remoteness of the patient, the condition of the roads, etc., the risk of removal of the patient to the hospital, outweigh the advantage of having him in the hospital, and in these circumstances, it is proper to perform the operation in the patient's home, or in some other suitable nearby place. These cases, however, are rare. The operation should be performed with dispatch. Murphy's dictum "Get in quick and get out quicker" still holds good. As to technique—I have my patients prepared in the following manner: A simple enema is given, unless it is suspected that perforation has already occurred. The abdomen is prepared by shaving thoroughly, scrubbing thoroughly but lightly, with water and green soap, rinsing with alcohol, and then mopping with a gauze pledget saturated with ether. The surface is then painted with 2 per cent solution of Mercurochrome in a 50 per cent alcohol and 10 per cent acetone solution, and covered with sterile gauze, until the time for operation, at which time, the abdomen is again painted with the solution. Using this method, we avoid the dermatitis or occasional burns that we formerly had, when using iodine.

Anesthesia: In suitable cases, I prefer local anesthesia, as it is attended with less shock and less post-operative discomfort; in other cases, gas-oxygen-ether anesthesia is used.

Operative Technique: A right rectus incision with retraction of the belly of the rectus inward, is preferred. This incision may be extended in either direction if desired. I have never seen a post-operative hernia following this incision, except in suppurative cases, where drainage was necessary. Having entered the abdomen, the appendix is sought for, by passing the finger along the lateral abdominal wall, posteriorly, until the gut is encountered. When the finger hugs the abdominal wall the portion of gut first encountered will always be the cecum, and the appendix may then be easily located. This method saves the tedious search one some-

times observes in the operating room. Having located the appendix, its condition is estimated. If an abscess is present, surrounding structures are walled off with hot saline pads, and the mass is then broken into. If the appendix is easily accessible, under such circumstances it is removed; otherwise it is not disturbed but drainage tubes are inserted into the abscess cavity. If no abscess exists, the appendix is mobilized and brought forward; the meso-appendix is elamped and ligated very securely and divided; a purse string suture is inserted around the base of the appendix using a No. 0 catgut with swedged on needle unless, as occasionally happens, the gut wall is too indurated and friable for such a suture; the appendix is then crushed at the base, ligated and divided with a cautery between clamps. The stump is inverted and the purse string suture, tautened and tied, leaving a perfectly smooth surface and minimizing the danger of adhesions. The suture on the meso-appendix, is tied to one end of the purse string suture, covering over the former site of the appendix, if this can be done without kinking the gut. The field is surveyed and the wound closed. One point in closure, that I believe worth-while describing, is the use of the silkworm gut-button stay sutures, as used by Bevan. A long, medium heavy, silkworm gut suture is threaded through both eyes of an ordinary large pearl button, such as is commonly worn on nurses' uniforms, and a large Bonney needle is armed with both ends of the silkworm gut. When the peritoneum has been closed, the Bonney needle, with the double strand of silkworm gut is passed through skin and fascia, and fascia and skin of the opposite side. The fascia is then closed in the usual manner and the skin suture is inserted. The strands of silkworm gut are then threaded through a button on the opposite side, and tied. This has the advantage of preventing strain on the incision, and does not tend to cut itself out or work loose, as does the ordinary silkworm gut suture. In suppurative cases it often saves the incision. Tight strapping of the dressings with its discomfort to the patient, and its embarrassment to respiration and circulation, is not necessary when a few of these combination stay sets are used.

Proper Surgical Management: When the operation has been concluded, post-operative management begins. Time does not permit going into great detail, but it may be said,

that the man who is most observant and careful in the post-operative care of these patients, will have the best results. The patient should be in the care of an especially competent nurse—one who is able to recognize complications such as acute dilatation of the stomach, ileus, post-operative hemorrhage, etc., in their incipency, when they can be most successfully combated. A stomach tube, or an intravenous infusion, or hypodermoclysis, when needed, is worth a hundred times more, when used early, than the same measure used late, or as a last resort.

Conclusions: The death rate from appendicitis is too high. Analysis of the present series, justifies the belief that this mortality may be reduced by earlier diagnosis; earlier surgical intervention; improved surgical treatment and post-operative care.

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DISCUSSION

DR. BERTRAM L. WARE, Greenwood: I want to say in defense of the general practitioner, that I believe the surgeon is just as much to blame for the increased mortality from appendicitis operations as the general practitioner. The first four or five years that I practiced medicine I had no trouble in diagnosing every case of appendicitis. Now, I can't diagnose one case out of five; I mean, satisfactory to my own mind. I believe there are two times to operate, and that is real early or real late. I believe the general practitioner makes mistakes by not making his diagnosis early. I believe the surgeon makes mistakes by operating his case when he gets to it. That is my candid opinion. I believe the surgeon should operate early; but, if he doesn't see the case early, I think it is better to wait.

DR. THOS. DOUGLASS, Ozark: I am grateful to Dr. Hoge for this interesting study of a very important subject. It was my impression, not having seen any figures, that the acute appendix cases were increasing in number all over the country. We hear of them more and more frequently.

I don't agree with Dr. Ware in the statement that the surgeon is more responsible than the general practitioner in these cases. The trouble with the general practitioner is in not making the diagnosis early, of course, and seeing that his patient is operated on promptly.

Every one of us who has had any cases at all can easily recognize the typical case and we are awake to the importance of early operation, and we have them operated always whenever we can induce the patient to submit to operation. But I believe, gentlemen, that the atypical case can constitute almost 50 per cent of the cases we see. They are very common. I used to think I was able to diagnose a case of acute appendix and I did recognize a typical case. Anybody can do that. But we see these atypical cases and we slip up on

them. Before we know it we realize, when it is too late for early operation, that we have got a case of acute appendix and then we are up against a serious problem. The question then is to know what to do. If we wait, we know that 75 per cent of such cases will get well; but that leaves an enormous number, too large a number, 25 per cent, who will not get well. I have seen numbers of these atypical cases, and the question resolves itself to this; with the acute abdomen, where we don't know what the trouble is, we know we should not give any purgatives. But sometimes we will have cases of food poisoning that look very much like acute appendix. Sometimes patients have partial obstruction from food impaction, and we don't know what's the matter.

Recently I had such a case, a young lady who had some digestive trouble, had colic at times for some months; never an acute attack of appendix, as far as I could learn. She had an attack in which she had fever and headache, and no abdominal symptoms at all. About a week later, and during the interval, she would occasionally have some stomach condition. She had pain in the abdomen, temperature, vomiting, but no pain localized in the right inguinal region. She vomited all the stomach contents, and the whole abdomen was tender. She had temperature of 102 that lasted for about 48 hours. There was that tenderness over the whole abdomen, but never localized over the appendix. She vomited everything introduced into the stomach. Not even water was retained. Her condition improved, but she still had severe colicky pains all over the abdomen, and developed diarrhea; not a troublesome diarrhea but frequent liquid movements. By keeping everything out of the stomach, these symptoms all subsided, but she continued to have severe colicky pains over the whole abdomen, which was soft; there was no rigidity; I thought that this was not a case of acute appendix, but I was not by any means certain about it. Well, she slowly recovered and has been well since, and she has been well now about a week. I wouldn't be surprised at any time to have her develop an acute attack of appendicitis.

If we are to avoid trouble in cases like this, we will get them to the hospital as soon as we can and have them there under observation. She didn't develop tumor in the region of the appendix. The symptoms were those of a partial fecal obstruction. She didn't have any more temperature, but later on, returning to a semi-solid diet, she began to have some pains again. A return to a liquid diet stopped all this, and she is up now and seems to be all right. But cases like this, and other cases, a large number of them, atypical cases, we don't know what the trouble is. We can't see what's going on within the abdominal cavity, making us very uneasy and uncertain about what to do, and I think that cases like these and cases of atypical acute appendicitis are the ones that make the mortality great in these cases. I don't blame the general surgeon so much. Since John B. Murphy began his method of treatment of peritonitis following acute appendicitis, perforating ulcer, etc., the mortality has been less.

I remember in a paper that he read, he made the statement that up to a certain time, when he adopted the treatment which he followed for the remainder of his life, most of the cases operated after the appendix had ruptured, or when there had been perforation of the ulcers, that most of them were thoroughly cleaned up, washed out, irrigated and sent back to die, and that at the time he instituted that famous method of treatment which he followed the remainder of his life,

he had at that time operated on 93 cases and only three of them had died, and they were not selected cases. They were just simply cases of ruptured appendix, of acute peritonitis, purulent, suppurative peritonitis.

DR. BERTRAM L. WARE, Greenwood: I think Dr. Douglass misunderstood me. I said I didn't blame the surgeon more than I did the general practitioner. I think it's a 50-50 case. I think we make a mistake in not diagnosing the case early, but I think the surgeon makes the same mistake in jumping on it when he gets to it, regardless of the condition of the patient.

DR. HOGE, in response: I don't believe there is much to add. I agree with both Dr. Ware and Dr. Douglass on the points they have raised. My purpose in presenting this subject as I said previously was to give a study of the facts and present them as they occurred. Facts are stubborn things.

Our fatal cases, 30 out of 33 cases, were due, we believe, to delay, part of which was the fault of the patient, partly the fault of the doctor.

In the diagnosis of these abdominal conditions, I believe it would be well to keep a very, very watchful eye on patients presenting symptoms of abdominal pain. If someone calls you up and tells you that Johnnie has stomach ache, one should not prescribe for that stomach ache without finding out what caused it. Sometimes that stomach ache is due to eating too many green apples or something of that sort, and sometimes it is due to something else.

As to the time of operation, that point is well taken. Cases seen late are best treated by Ochsnerizing. The death rate in Deaver's Clinic, in Ochsner's before his death and in the Mayo Clinic has been reduced to something like three per cent in the late cases, but the point is that this mortality of three per cent is too high.

A study of our cases has shown that cases seen before perforation occurs almost invariably get well. So we should keep a watchful eye on these patients and get them to operate quickly before perforation occurs, or, if it does occur, just as soon as possible thereafter, leaving the point to the surgeon's judgment as to whether it should be operated at once or treated by the Ochsner method. I think if perforation occurs two or three hours previous, operation at that time would be more favorable and attended by lower mortality than by Ochsnerizing such patient. Patients seen 12, 15 or 18 hours later would probably have a lower mortality if treated by the Ochsner method.

SIMPLE COLITIS*

BARTON A. RHINEHART, M. D., Little Rock

Simple colitis is a new name applied to all the functional disturbances of the colon. These functional changes are recognized as having a common basis in abnormal colonic irritability. The variations in symptoms between obstipation, diarrhea, marked tenderness, and cramps are merely variations in the irritability. The range of stages of irritability of a hollow anatomic passage containing both sphincteric and longitudinal muscles and a

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mucosa gives an indication of the multiplicity of symptoms. It is readily seen that a structure of that type being irritable may present tenderness, local or general spasms, cramping, paresis, paralysis, and exudation of mucus or serum. General abdominal tenderness indicates general colonic tenderness; local abdominal tenderness may or may not be local colon tenderness. Chronic constipation may be local or general spasm or paresis; cramping may be local or general hyperactivity of the muscles.

The medical literature contains very little about simple colitis as a clinical entity. There is nothing in surgical works about it and not much appears in writings on internal medicine. The radiologists have disclosed and correlated most of the information because only the radiologist has the opportunity of studying the function and motility of the colon directly and of associating the subjective symptoms with the physiological changes.

The occurrence of simple colitis is not limited by sex, age, or race. It is, however, more prevalent in females than in males and more prevalent in adults than in children. The latter fact is explainable by the reasons that adults have a greater mental activity and have had a longer time to form bad habits.

The abnormal irritability of the colon in simple colitis may be either general or local. The symptoms may imitate any of the chronic organic lesions of the abdominal viscera. The complaints and symptoms are numerous. There may be localized tenderness in the epigastrium, nausea, distention, vertigo, constipation, diarrhea, cramps, gas, substernal pain, belching, backache, bad taste, and left-sided abdominal pain. The most common of the complaints are fullness after eating, gas pains and epigastric distress not bearing a definite relationship to the taking of food. The epigastric distress is often accompanied with achylia gastrica or gastric hyperacidity. In these patients the only point of difference between colitis and peptic ulcer is the time of occurrence of the symptoms. Neither constipation nor diarrhea is constant and often there is neither. In the cases where there is neither, the objective findings are few. The history is usually atypical for any of the organic conditions. The stools may show a soft, unformed state with a foul odor. Gas bubbles and mucus may be found in the feces. There is no jaundice. When objective signs are absent, the confirmation of the diagnosis can only be made by roentgenological examination. Lacking the assistance of the x-ray the condition is usually

called adhesions by the surgeon and gas pains by the patient. One of the most common mistakes is to mis-name simple colitis peptic ulcer solely because of the epigastric distress.

The etiology of colitis is partly recognized and partly surmised. Neurogenic disturbances are given first place in the list of causes. In this connection Savignac and Sarles (1) of France report an abnormal mental condition in 71 per cent of their cases of colitis. The mental conditions mentioned are those of common occurrence and not of the psychotic type. Hysteria, introspection, fear, anger, hypochondria, neurasthenia, melancholia, unhappiness and sorrow, are the commoner mental manifestations. The colitis and the mental condition subsided at the same time. The other causes given in the literature are bad habits of living and colonic irritants. Under bad habits may be mentioned the cathartic habit, overwork, over-eating, exposure, and insufficient rest. The colonic irritants may be physics, strong irrigations, bacteria, inspissated feces, enteroliths, chemical irritants and foreign bodies. Gastric and enteric abnormalities and atony may also be given as etiological factors. Undoubtedly the most common cause is continued catharsis.

A brief review of the anatomy of the colon as seen by the roentgenologist is necessary for the comprehension of the changes encountered. Running longitudinally along the colon from the cecum to the rectum there are three bands of muscle known as taeniae. The taeniae are held to a smaller diameter than the diameter of the mucosa by circular bands of muscle which decussate and receive their fulcrum from the taeniae. The circular and longitudinal muscles throw the wall of the colon into three rows of transverse sacculations or haustrae. Haustra is the Latin word for bucket. Only two of the three rows of haustrae are presented to x-ray vision because the posterior row is hidden. The clefts between the haustrae are normally as deep as one-half or two-thirds the transverse diameter of the colon. The haustrae cannot be seen at autopsy or in the dissecting room because they are relaxed by death. Deep anesthesia also relaxes them so that they can only be seen in vivo when the abdomen is opened under local anesthesia. Since the haustrae do disappear so readily they represent the delicate, balanced function of the living colon. Being such a delicate mechanism nervous influences involving the bowel produce characteristic changes in the haustrae that are only determined by

the radiologist with the assistance of opaque material.

Physiologically the colon is divided into two main parts. The right side is used as a reservoir and the left side has the function of expulsion. The absorptive powers of the cecum and ascending portion are well known. The rectum has as delicate a function as any of the other parts. It does not fill except just before defecation. The valve between the sigmoid portion and the rectal ampulla does not give way until the pressure reaches a sufficient power to fill the ampulla. There is no dribbling into the rectum. With this distention of the rectum the defecation impulse is sent over the sensory nerves and the evacuation takes place. When the defecation impulse is ignored for a time the distention of the rectum does not give the proper sensation and the victim has the rectal retention of so many cases of chronic constipation. Some of these people are even unaware of the presence of gas in the rectum. They often complain of an inability to pass gas by that route. The physiological mechanism for the propulsion of the colon contents is a wave of peristalsis. This wave is described by Case (2) and Holzknecht (3) as a large, progressive contraction. They have applied the name "mass peristalsis" in contrast to the small peristaltic waves seen in the stomach, duodenum, and reversely in the cecum. Mass peristalsis occurs three or four times daily, usually soon after meals. When the colonic content immediately proximal to the rectum is sufficient to fill the bowel at that point, the mass peristalsis pushes it into the rectum. When the irritability of the colon is increased, the waves of mass peristalsis become more frequent and sometimes quite painful. The cramps associated with the inflammation in acute appendicitis are examples of the pain and power of the abnormal mass peristalsis. The majority of the subjective symptoms of discomfort in simple colitis are due to the peristalsis. The sensations localized in the epigastrium from the transverse colon may be misinterpreted as being gastric or duodenal in origin.

Roentgenologically, the colon may be studied by means of the barium meal or the barium enema. Because it discloses the form and functional activity of the colon and, when properly prepared, is not irritable, the meal is the more desirable method. The enema, on the other hand, may be thermically, chemically or statically irritating and so change the colonic form. Also the milder forms of coli-

tis show no morphological change when the colon is filled with an enema. In advanced cases, however, the enema gives information of permanent colon changes.

BARIUM MEAL

When a barium meal of proper material is given to a person with a normal gastrointestinal motility, the stomach begins to empty in a few minutes. It is completely empty in about five hours providing no more food is added. By this time the barium has entered the cecum. At the end of six hours the barium has advanced to the hepatic flexure of the colon and the tail of the meal is in the loops of the ileum. (4) After nine hours the ileum is empty and the head of the barium column has reached the splenic flexure. In twenty-four hours the meal is spread throughout the colon and there has been one evacuation containing barium. The cecum is empty or it may contain a small quantity of the barium. The rest of the colon contains an uninterrupted column of the barium-containing feces. In forty-eight hours all of the barium is gone, excepting small flakes.

During the passage of the meal through the colon, the haustrae are filled with it and present an even segmentation. The haustrations are present from the cecum to the recto-sigmoid valve. The normal rate of passage and the well-filled symmetrical haustrae are the roentgenological findings in the normal colon.

In functional disturbances there are variations in the rate of propulsion of the meal and variations in the shape of the barium content of the colon. One would expect that a rapidly passing colon content would be accompanied with diarrhea, but this is not true. It is true that cases of simple colitis manifested by diarrhea do show rapid passage of the meal through the bowel, but a greater number show a rapid passage with abnormal retention. The spastic colon is irritable and will hasten the meal even though evacuation is retarded. The types of irritable colon without diarrhea may show the barium in the sigmoid portion at the end of six hours. The rapid passage of the barium through the colon is, then, one of the findings in the irritable colon or simple colitis.

Rarely there is a retardation of the bowel contents and the barium has not reached the colon six hours after the ingestion of the meal. This retardation is pathognomonic of colitis.

Another common change is in the depth of the clefts between the haustrae. The contrac-

tions of the circular muscle bands certainly represent irritability when the contraction nearly crosses the free lumen. This increased tonus is usually associated with increased speed of progress of the colon content.

Destruction of the normal morphology of the haustrations occurs in more advanced conditions. There are changes in the size, shape, balance, and spacing of the sacculations suggesting disturbances in nerve conduction similar to that in cardiac extrasystoles. These changes are marked by an irregularity so that there is no similarity in the form of the haustrae. Sometimes there is a complete obliteration of the haustrae and a ragged, distorted, or twisted appearance of the fecal column is presented. The outline of the colon in these forms is that of a smooth tube.

A widespread breaking up of the barium column is noted in other cases. When this finding occurs in the first nine hours, it is characteristic of colon irritation. Although gas may not be present, the disintegration is usually accompanied with gas in the flexures. The rapid passage of the barium through the proximal colon and the retardation distally are found in the type of simple colitis previously called dyskinesia or spastic colitis.

In cases of colitis associated with diarrhea the shadow of the barium shows another change. The rapid passage of the watery material gives a streaky or mottled appearance. The mottled shadow is called feathering.

BARIUM ENEMA

It has been stated that the barium enema is not as valuable in the study of simple colitis as the meal. However, in advanced cases of simple colitis there are permanent changes in the form of the colon that are well delineated by the enema. The obliteration of the haustrae and the diminution of the diameter of the colon are perhaps better seen by the enema than by the meal. The atonic colon is also best seen by using the enema. In the normal colon the haustral markings are more or less ironed out or flattened by the enema. If the enema is irritating, a fibrillation also occurs in the normal colon. This fibrillation may be accompanied with diminution of the descending portion through temporary spasm and resembles the spasticity of simple colitis. The meal, therefore, is best used for disturbed motility and the enema best used for determining permanent changes in size and form.

CONCLUSIONS

The diagnosis of simple colitis is difficult and often impossible from history and physical findings. It is very often confused with chronic appendicitis, peptic ulcer, cholecystitis, adhesions, and other organic diseases. The x-ray findings are definite and can establish the diagnosis.

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DISCUSSION

DR. ARTHUR F. HOGE, Fort Smith: The study of the physiology of the gastrointestinal tract, has undoubtedly advanced a great deal in the last few years as the result of roentgenological aid. Two years ago I had the privilege of hearing Prof. Todd give a "chalk talk," with some lantern slide demonstrations, of the physiology of the gastrointestinal tract, especially of the colon, in which he used medical students of the Western Reserve University at Cleveland, as subjects and a point that Dr. Rhinehart has not brought out that I think we should bear in mind was demonstrated in this talk and demonstration by Prof. Todd; that is the fact that nervous impulses play a great part in the colonic impulse. We are all familiar with the nervous diarrhea that some people have when under a strain. Prof. Todd showed in his work that, by taking the first-year medical students immediately after they had matriculated and before they became accustomed to the routine of the medical school and the laboratories, etc., taking them in before any preparation whatever, and studying the colonic physiology with the aid of the roentgen-ray, there were perhaps all of the findings that Dr. Rhinehart has spoken of pertaining to simple colitis. In other words, there was an increase of the peristaltic wave. The head of the barium meal reached the descending colon and passed down through the sigmoid much more rapidly than is considered normal. The same students rechecked after a period of several months showed a normal progress of the barium meal. I think, the point that should be made is this: We should not rely upon one roentgenological examination to establish a diagnosis of colitis, because the patient comes into the x-ray laboratory for the first time naturally a little bit apprehensive; he is being examined by his physician and by the x-ray man and he is being pulled here and pulled there and examined in various and sundry ways, and naturally that would perhaps tend to cause a variation in the normal colonic wave.

With reference to the treatment of these conditions, Dr. Case of Battle Creek, in a study of the colonic physiology, shows what he calls a "colonic rush." And this colonic rush, as the fecal mass goes from the cecum around through the ascending colon, the transverse colon, down through the descending colon and sigmoid into the rectum, the first impulse one has is to defecate.

The patient heeds the impulse; the fecal mass is expelled. If the patient waits for a few moments, there is a second colonic rush at which time the colon is emptied. If the patient after that first colonic rush is in a hurry and he feels relieved, the second colonic rush is not so pronounced, he fails to heed it, then he does not completely empty the colon; but the mass that is there, the residual mass, through reverse peristalsis goes back up the descending colon, crosses around and lodges in the cecum. I believe, perhaps that this may give a clue to treatment. If patients are able to stay long enough on the stool to have a complete bowel movement, and not be in a rush about having a bowel movement, but to stay there long enough to get the benefit of that second colonic rush, as Case described it, he will have a complete emptying of the colon, and perhaps these cases of simple colitis will easily clear up completely or will not occur.

Another aid to diagnosis that is very valuable, I think, is the use of the proctoscope or sigmoidoscope. You can oftentimes corroborate the diagnosis if suspected or recognized by means of the roentgen-ray, with the use of the sigmoidoscope.

DR. A. C. SHIPP, Little Rock: I wish to speak to Dr. Rhinehart's paper simply to urge more routine gastrointestinal roentgenological study and shall do that by reciting the history of a case, a man 35 years of age, who had been running afternoon temperature. The fever increased up to 102 to 102½ each afternoon. Finally he began to have rigors. Examination of the blood showed the presence of the malarial plasmodium, and he was given anti-malarial treatment. He quit having his rigors and periodical symptoms, but he continued having afternoon fever, and developed a pain in the region of the upper portion of the left kidney and in the upper left lumbar region. This pain became severe. He was sent to the hospital and kept there for a few days. Ureteral catheters were passed and diagnosis of a left ureteral kink was made. This was treated by passing the ureteral catheter several times. The pain still continued and the afternoon fever continued. Pictures of the lungs were made and pronounced negative. Finally he was told that they felt this was a case of tuberculosis because of the regular recurring afternoon rise of temperature, and because of these well-known symptoms of tuberculosis the family readily believed that he had tuberculosis. He was referred to us for a study of the case. We gave him a biological test and found that he had a local reaction, but neither a focal nor general reaction. We said at once that this man did not have tuberculosis. We asked for a study of the gastrointestinal tract. We found that the barium passed readily over to a point about an inch or two beyond the splenic flexure and there seemed to stop; a partial obstruction. A small portion would work around down below this point. We found an adhesion from a former operation for a diseased appendix pulling the colon at this point to the right.

The question was whether or not he should be subjected to surgery to release this adhesion and relieve this condition. He was again placed in the hospital. A high enema of olive oil was introduced into the rectum and retained as long as he could. The following day we found that we

had a very noticeable and palpable mass in the left flank. We continued giving the oil enemas and he began to complain of pain low down in the rectum. Putting a glove on my finger, I felt a very hard mass in the rectum and, breaking this up, he was able to expel a hard mass of inspissated feces. He began to feel better immediately. His afternoon fever disappeared entirely and he has been working ever since. He has not been operated for his adhesion, neither has he been put on a rest treatment nor biological treatment for tuberculosis.

DR. RHINEHART, in response: Dr. Hoge's discussion of the nervous impulse in relation to the colon was a thing I hoped would not come up because it complicates the procedure. Dr. Hoge is perfectly right in what he says. We see some patients who, on giving the barium meal, have an absolute stoppage of motility for fifteen or twenty minutes and we have to wait around until peristalsis starts up in that stomach. Others will show immediate peristalsis. There has been an attempt to explain that on the basis of vagotonicity or sympathetotonicity. However, I personally believe that part of it is mental. Some of the patients that come into the x-ray room for a gastrointestinal examination are badly frightened, although they won't admit it; so that the motility of their gastrointestinal tract has changed considerably. All these things have to be taken into consideration in evaluating the irritability of the colon and the rapid passage of the barium meal and that is a difficult problem. I suspect that there is a great probability of mistaken diagnosis in some of these cases where we cannot rule out the fright or the mental condition.

It has only been a few years ago that we were told by certain surgeons that chronic appendicitis did not exist. We have so many cases of right-side distress of minor severity that last for months that we are unable to explain in any other way than by saying it was chronic appendicitis. Now, that the surgeons have said chronic appendicitis does not exist, we have to have another explanation and the most probable one, according to the present laws, is that it is colonic irritability.

I do not think the last word has been said about the treatment of simple colitis. I am an agnostic myself on the treatment of this condition, although I have no good reason to form any opinion, not having treated many. I believe that the colon should be rested and the mind seduced in treating these cases. To rest the colon, you have to keep irritants out of it; you have to keep epsom salts and calomel out of it and you have to keep bran out of it as bran is an irritant. You put the patient to bed and rest the colon as much as possible, giving them a concentrated diet with sufficient concentrated vitamins to supply their needs and then seduce the mind away from themselves and, of course, you may get results. I have seen cases treated satisfactorily that way by other doctors. A particular doctor that I am thinking about doesn't give any physic. He puts the patient to bed and rests the colon and leaves him there until the bowels move. The greatest problem is getting the mind off of it; and he gets results in some cases. In other cases he is not able to seduce the mind properly.

In the literature that I have read in preparing this subject, the favorite form of treatment to make these bowels move, when it is compulsory, is an enema of mineral oil. The authors quote the old adage: "Never put anything into the colon that you wouldn't put in your eye." But there are lots of things that go into the colon that you wouldn't put in your eye.

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Notice of deaths, removals from the state, changes of
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ANOTHER VETERAN PHYSICIAN
CALLED TO HIS REWARD

Dr. George S. Brown of Conway, died at his home on May 11, after five weeks illness of pneumonia. Although in his eightieth year Dr. Brown continued in active practice until his fatal illness. Born in Tennessee in 1848 he moved to Texas when a small boy. He graduated from Dartmouth College, Medical Department in 1872; from Bellevue Hospital Medical College in 1877, and from the Medical Department, University of New York in 1878. He took post-graduate hospital work in the larger clinies of this country and Europe.

Dr. Brown kept fully up to the times as he advanced in years. He harbored no prejudices against new fangled ideas and very much disliked to be called a "doctor of the old school." He believed that there always was something the physician should learn, no matter how much he might already know by reading and experience and he actually did post-graduate work after living to the traditional three score and ten.

Nine years ago he was elected President of the Arkansas Medical Society, was for eight years a member of the State Board of Medical Examiners, was one of the promoters of the Tuberculosis Sanatorium at Booneville and had been on the Board of Trustees ever since it was founded nineteen years ago. He was a Fellow of the American College of Surgeons and for two years was a delegate from the State Society to the American Medical Association. He was a member of the Masonic fraternity and of the Woodmen of the World.

With the exception of two years spent in Florida and one year in Texas, Dr. Brown had practiced his profession in Conway ever since he settled there as a young man. He married a Conway girl, Miss Lula Harrell, who, together with a son, Mr. George S. Brown, Jr., survives him. The funeral was attended by a large number of the local citizens and several members of the medical profession of the State, was held at the residence of the deceased at Conway, May 13.

Dr. Brown was an active member of his local and State Medical Societies, as well as being closely identified with organizations having for their objective the welfare of the community in which he lived. He leaves to his family and friends the precious memory of an honored name and a well spent life.

Editorial

TREATMENT OF CHRONIC CERVICITIS

Dr. Dewell Gann, Jr., of Little Rock, gave the recent medical convention an excellent paper on "Histopathology and Treatment of Chronic Cervicitis," which will be found on the front page of the reading matter in this issue. Available space prohibits many of the illustrations that should have been included.

He is to be congratulated on being the pioneer in histopathological research on the cervix and his paper was received with close attention. Especially were the members of the society interested in the idea that, from one inflammatory process into another by stages even the most simple infiltrating processes might end in malignancy.

The Journal agrees with Dr. H. E. Walther of New Orleans, who, commenting on Dr. Gann's paper, called attention to the former condemnation of the practice of obtaining with a knife or with a cautery, specimens for microscopic study, on the ground that such surgery tended to open up channels that would liberate cells and disseminate cancer throughout the patient's system. In the present perfection of the art of surgery such results are little likely to occur when an operation to obtain biopsy specimens is intelligently performed.

Without such biopsy specimens the physician is largely working in the dark. As Dr. Walther pointed out, there has been no definite proof that any such dissemination has ever occurred. The paper of Dr. Gann and the discussion of Dr. Walther will repay careful reading by those who were not present at the recent El Dorado meeting.

Personal and News Items

Dr. F. Walter Carruthers of Little Rock had charge of the exhibit on fractures, held June 11, at Minneapolis. This exhibit lasting several days was under auspices of the Section on Surgery, General and Abdominal, and Section on Orthopedic Surgery, of the American Medical Association, illustrating demonstrations on plaster of paris, fracture of tibia and fibula, fracture of ankle (methods of reduction and treatment), fracture of clavicle (methods of reduction and fixation), supra condylar fracture of humerus (methods of reduction and fixation).

At the Golf Tournament held at El Dorado, during the May meeting of the State Society, the Dewell Gann, Jr., Loving Cup for 1928 was won by Dr. F. Walter Carruthers. Congratulations, Walter.

Dr. J. H. Stidham of Walnut Ridge, visited Little Rock recently.

Dr. Frank A. Norwood of Ashdown, has accepted a position with the U. S. Marine Hospital No. 43, Ellis Island, N. Y.

Dr. J. Albert Burns, has formed a partnership with his father, Dr. W. M. Burns, and will establish offices at Fourth and Main, North Little Rock. Young Dr. Burns is a graduate of the University of Arkansas, School of Medicine, Class of '27 and has recently completed one year of internship at St. Paul's Infirmary, Dallas, Texas.

Dr. J. R. Lynn of Hazen has returned from a recent visit to Oklahoma City.

Dr. A. C. Shipp, Little Rock physician, has been appointed by Governor Parnell as a member of the Board of Trustees of the Arkansas Tuberculosis Sanatorium, to fill the vacancy caused by the death of Dr. George S. Brown of Conway.

Dr. and Mrs. O. L. Williamson and Miss Leland Williamson of Marianna, have returned home, after spending the past five months in Europe.

Increase in Narcotic Tax Rejected.—The proposal in the pending revenue reduction bill to increase the tax on physicians, dentists and veterinarians under the Harrison Narcotic Act from \$1 to \$3 was overwhelmingly rejected in the Senate, May 15. The debate against the amendment was led by Senator Copeland of New York, a physician, who stated that every doctor is aroused over this class legislation. Others opposing the amendment were Senators McKellar of Tennessee and Caraway of Arkansas, who urged that even the \$1 narcotic tax be eliminated.—*Jour. A. M. A.*, May 19, 1928.

WANTED—Salaried appointments for **Class A physicians** in all branches of the medical profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. **Aznoc's National Physicians' Exchange**, 30 North Michigan, Chicago. Established 1896. Member the Chicago Association of Commerce.—(Adv).

Woman's Auxiliary—Arkansas Medical Society

The following resolutions were adopted at the El Dorado Meeting of the State Auxiliary, May 2, 1928:

No. 1

Whereas, there is need for a State institution which will serve the sick and indigent poor of the State,

Therefore, Be it Resolved, that the Woman's Auxiliary to the State Medical Society, in convention assembled, endorse this movement and pledge its aid in every way possible toward the accomplishment of this purpose.

Resolutions Committee.

No. 2

Whereas, the American Medical Association Auxiliary has endorsed the movement for organizing Junior Auxiliaries and has prepared suggested programs for same.

Therefore, Be It Resolved, that we, the Woman's Auxiliary to the Arkansas State Medical Society, endorse this movement and lend all efforts possible to the accomplishment of Junior Auxiliaries.

MRS. C. G. HINKLE, *Chairman*,
Organization Committee.

No. 3

Whereas, a need has been presented to this organization for a fund that will be available to make small loans to medical students attending the University of Arkansas Medical School, as an aid to assist them to complete the work necessary for receiving their degree;

Therefore, Be It Resolved, that the Auxiliary to the Arkansas Medical Society create a fund called the University of Arkansas Medical Student Loan Fund and a special committee be appointed to have charge of this work.

Respectfully submitted,
MRS. T. G. PORTER, *Chairman*.

No. 4

Whereas, our efficient and beloved Secretary, Mrs. E. L. Thompson, and Treasurer, Mrs. J. M. Phillips, are unable to be with us at this time;

Therefore, Be It Resolved, that a telegram be sent to each of them expressing our regret at their absence.

Respectfully submitted,
MRS. C. G. HINKLE.

No. 5

Whereas, Dr. R. H. T. Mann, the incoming President of the Arkansas State Medical Society, has suggested that county institutions be inspected to note conditions in each,

Therefore, Be It Resolved, that the Woman's Auxiliary to the State Medical Society, ask that each County Auxiliary appoint a committee for this purpose, which shall make a report to the State Committee on Health Education.

Resolutions Committee.

No. 6

Whereas, our beloved President, Mrs. Chas. Travis Drennen, and her officers have given their untiring efforts to carrying on the work of our Auxiliary during the year:

Therefore, Be It Resolved, that the Woman's Auxiliary to the Arkansas State Medical Society, in convention assembled, extend to them our love and thanks.

Respectfully submitted,
MRS. C. W. GARRISON,
MRS. THOMAS F. HUDSON,
MRS. W. R. BROOKSHER, JR.

No. 7

Whereas, the President and members of the Woman's Auxiliary to the Union County Medical Society have, during this session, provided for us comfortable quarters for our meetings; given us a delightful tea at the home of Mrs. Purifoy; given us a delicious luncheon at the Country Club; and have shown us many other courtesies during our stay in their hospitable city;

Therefore, Be It Resolved, that the Woman's Auxiliary to the Arkansas State Medical Society, in convention assembled, desire you to know that our stay with you has been one of

ever increasing pleasure, and extend to you our sincere appreciation and thanks.

Respectfully submitted,

MRS. C. W. GARRISON,

MRS. THOMAS F. HUDSON,

MRS. W. R. BROOKSHER, JR.

A Suggestion From Mrs. John O. McReynolds

I would urge each auxiliary member to organize health committees in their respective clubs, then pledge themselves to serve on same thereby helping both their club and auxiliary. Interesting and instructive moving pictures on health subjects can be provided by State and National Auxiliaries.

Mrs. T. G. Porter appointed the following committees, at an executive session held May 2.

Student Loan

Chairman, Mrs. C. E. Oates, Dean of Student Body.

Organization

Chairman, Mrs. P. E. Thomas, Clarendon; Mrs. J. C. Cunningham, Little Rock.

Constitution and By-Laws

Chairman, Mrs. F. M. Williams, Hot Springs.

Finance

Chairman, Mrs. B. A. Bennett, Little Rock; Mrs. G. S. Brown, Conway; Mrs. M. M. Blakeley, Benton.

Public Relations

Chairman, Mrs. O. J. T. Johnson, Batesville; Mrs. C. E. Oates, Little Rock; Mrs. F. D. Smith, Blytheville; Mrs. L. L. Purifoy, El Dorado; Mrs. C. T. Drennen, Hot Springs.

Education and Public Health

Chairman, Mrs. L. D. Reagan, Little Rock; Mrs. H. K. Wade, Hot Springs; Mrs. C. A. Archer, DeQueen; Mrs. R. C. Kory, Little Rock.

HYGEIA

Chairman, Mrs. W. R. Brooksher, Fort Smith; Mrs. L. H. Lanier, Texarkana; Mrs. T. E. Benton, Lonoke.

AUXILIARY—PULASKI COUNTY MEDICAL SOCIETY

The last meeting of the fiscal year of the Auxiliary of the Pulaski County Medical Society was held on Wednesday, May 16, 1928, at the home of Mrs. C. C. Reed, with Mrs. Oscar Gray as assistant hostess.

A very interesting business meeting took place, at which time the various committee chairmen read their respective reports of the year's work.

Mrs. B. A. Rhinehart and Mrs. C. W. Garrison brought reports before the organization relative to the State Auxiliary Convention held in El Dorado.

Little Rock, Arkansas
May 16, 1928.

Madam Chairman:

Your Chairman of Committee on Public Relations has had scant opportunity to fulfill the many duties that might have fallen her way had she not been handicapped.

There has been no legislation to engage our attention during the past year.

We were invited to attend a conference luncheon with the Pre-School Committee of the Little Rock Parent-Teachers Association at the home of Mrs. Stewart, the Chairman, which was exceedingly interesting and inspiring. We found many of our members to be members of this conference and actively engaged and interested in the pre-school work. We feel that this is an ideal way of carrying on our public relations program, it being one of the aims of Auxiliary to have as many members as possible hold memberships and direct relation in other clubs and organizations.

We, the Auxiliary to Pulaski County Medical Society, are fairly well represented in various organizations and we feel that any erroneous ideas or propaganda hurtful to the profession would be properly cared for by our representative members. Such members should acquaint themselves with the resolutions adopted at our recent State Convention and whenever opportunity offers say a word in the interest of the service which the adoption of these resolutions puts upon our shoulders.

Respectfully submitted,

Committee on Public Relations,
Mrs. C. W. Garrison, Chairman.

The first meeting for the year 1928-1929 will be in the form of a luncheon, to be given during the month of October, details of which will be announced later.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society held its regular monthly meeting the afternoon of May 10, in Siloam Springs.

Present: Powell, Eubanks, Clemmer, Smiley, Duckworth, Hughes, Scott, Wilson, Steele, Gullledge, Koobs, Rice, Atkinson, Harrison, and Pickens.

Visitors: Drs. Simpson and Skinner of Kansas City, Mo.; Drs. Buckley, Harvey and Rose of Fort Smith; Drs. Roberts, Callen and Wood of Fayetteville; Dr. Swift of Elkins; Dr. Robinson of Cincinnati, Ark.; Dr. Poyner of Stillwell, Okla.; Dr. Sellers of Westville, Okla.; Dr. Rogers of Watts, Okla.; Dr. Allison of Tahlequah, Okla., and Dr. Fleckenberger, D. D. S., of Siloam Springs.

Dr. Morris B. Simpson of Kansas City, Mo., presented a paper entitled, "Ear Complications in Acute Infectious Diseases." He emphasized the necessity of early opening of the middle ear cavity to avert complications.

Dr. Edward H. Skinner of Kansas City, Mo., read an excellent paper entitled: "Menopausal Bleeding and Carcinoma of Cervix Uteri."

Drs. Simpson and Skinner came under the auspices of the Kansas City Southwest Clinical Society.

DESHA COUNTY

(Reported by W. B. GRAYSON, Sec.)

The Desha County Medical Society held its regular monthly meeting at McGehee, Tuesday, May 15, at the Central Cafe.

Present: Smith, Chenault, White, DeClark, Miller and Grayson of McGehee; Isom and Biscoe of Dumas; Kimbro of Tillar. Visitors: Drs. Paul Mahoney and Fay Jones of Little Rock; Dr. Easterling of Lake Village; Drs. Baker and Thompson of Dermott and Dr. Turner, Dentist, of McGehee.

The scientific program, which followed the banquet, was as follows: "Sinus Infections" by Dr. Mahoney. "Cardiac Disease in Children," by Dr. Grayson. "Prostatism," by Dr. Fay Jones.

Desha County voted to be included in the Tri-County Medical Society, composed of Desha, Chicot and Ashley Counties. Meetings to be held twice a year.

CHICOT COUNTY

(Reported by W. D. EASTERLING, Sec.)

The Chicot County Medical Society met in Lake Village, May 10, 1928. President, W. A. Craig, in the chair.

Present: Craig, Clark, Baker, Thompson, W. W. Easterling, W. D. Easterling, Wilson, Douglas, and McGehee.

Drs. W. W. Easterling and S. W. Douglas gave a report of the meeting of the State Medical Society. Following this report the Basic Science Law was discussed.

Dr. E. Baker presented a paper entitled "Disorders of Sleep." Discussed by Drs. McGehee, W. W. Easterling, Wilson and Douglas.

A case was reported by Dr. Wilson of Lake Village, and it was decided to have a case presented at each meeting of the society, in addition to the regular program.

Dr. Clark will prepare a paper for the next meeting and Dr. Wilson will give a case report.

SEBASTIAN COUNTY

(Reported by C. S. BUNGART, Sec.)

The Sebastian County Medical Society met in regular session, May 8, 1928, in Fort Smith. Dr. J. H. Buckley was program chairman.

Present: Benefield, Blair, Brooksher, Jr., Buckley, Bungart, Dorsey, Goldstein, Hall, Hoge, Kennedy, King, McCormack, Means, Smith, J. D. Southard, J. S. Southard, Stubbs, Ware, Wilson, Wolfermann, Rose, Redman, Powell and Wimberly.

Mr. B. T. Davidson, attorney, gave a talk on "Medical Jurisprudence," which was both interesting and instructive.

A protest was wired to both our Senators and Congressmen against the Senate Committee on Finance for their action on the deductibility of the physicians traveling expenses for attendance at professional meetings, also against the three-fold increase of the narcotic law license.

Abstracts

APPENDICITIS

John B. Deaver, Philadelphia (Journal A. M. A., May 26, 1928), discusses the following questions: What are the different locations of the appendix? Is it possible to denote the position of the appendix when acutely inflamed? What bearing has the location of the inflamed appendix on the method of attack? What are the conditions that make the diagnosis of acute appendicitis doubtful at times? Is the diagnosis always possible? What conditions does acute appendicitis sometimes simulate? What are the most important physical signs in the diagnosis of acute appendicitis? How much importance can be attached to the blood picture in acute appendicitis? Has the expression left-sided appendicitis any significance? If so, what? What is the relational or topographic importance of the anterior longitudinal muscular band of the cecum, the ileocecal and subcecal fossae, the ileocolic and ileocecal folds—the light-houses that the surgeon looks for to guide him safely in his appendical operative tours? What are the best routes of approach to the acutely inflamed appendix, in the absence and in the presence of an appendical collection? Is the appendix the most common intra-abdominal focus of infection? In acute conditions of the abdomen should the appendix be thought of first, last and always except in the cases presenting an abdominal scar, the result of a previous abdominal operation? What are the most common sites of appendiceal secondary collections? How is appendiceal infection carried to distant parts? By what routes does appendiceal infection reach the blood stream? Finally, what is the best treatment for acute appendicitis? The treatment of acute appendicitis should always be surgical and never medical. In acute appendicitis, in the absence of a forbidding peritonitis, operation should be performed at once; not to do so is to endanger the life of the patient. Barring unforeseen conditions and extensive complications, operation should be attended with little risk. Fulminating, explosive appendicitis means a large perforation, and operation should be performed at once if the patient is

seen early. In acute appendicitis, the ideal treatment is to take out the appendix before peritonitis occurs. The danger in appendicitis is the danger of peritonitis; therefore if the appendix is taken out before this occurs, the risk of the operation is very small.

EFFECT OF PREVIOUS ADMINISTRATION OF ANTITOXIN AND TOXIN-ANTITOXIN ON SERUM REACTION

Previous injection of antitoxin seems not to affect future serum administration markedly, as almost as large a percentage of serum reactions occurred in patients not having received previous serum injections as in those so treated. Of the few patients seen by Sophie Spicer, New York (Journal A. M. A., June 2, 1928), with marked serum reaction, none happened to have received antitoxin prior to the present illness, while those patients with a history of previous antitoxin, when exhibiting a serum reaction, had it in a mild or moderate form. Previous administration of toxin-antitoxin appears to have little or no effect on subsequent serum treatment. Only four of the twenty-eight patients in this series who gave a history of having been immunized against diphtheria with toxin-antitoxin had a serum reaction. This small series of cases seems to prove that toxin-antitoxin does not sensitize to future serum injections to such an extent as to produce any appreciable effect. The fact that these patients all had scarlet fever suggests the value of toxin-antitoxin are usually protected against that disease. The force of this is somewhat lessened by the fact that the patients with diphtheria were on the average younger than those having scarlet fever. The reason for the comparatively mild type of serum reactions may be the method of treatment:

It's good to have money and the things that money can buy; but it's good, too, to check up once in a while and make sure you haven't lost the things that money cannot buy—Geo. Horace Lorimer.

Nothing is easier than fault finding; no talent, no self-denial, no brains, no character are required to set up in the grumbling business.—Robt. West.

He is the happiest, be he king or peasant, who finds peace in his home.—Goethe.

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Original Articles

THE PROFICIENCY OF PREVENTIVE MEDICINE DEPENDS UPON APPLIED CHRISTIANITY*

By HENRY THIBAUT, M. D., Scott

No one can deny the great advance of Preventive Medicine within the past few years. Vast sums of money, executive talent and scientific endeavor have been used, but the results are far from what they should be. We are still having epidemics of preventable diseases and our people are still losing their lives through two unnecessary causes; Ignorance and Selfishness.

The first of these causes, Ignorance, is still operative in an astonishing degree, but through the activities of the various health organizations, the schools and the medical profession, it is rapidly diminishing.

As this first cause diminishes, the hideous proportions of the second cause, Selfishness, stand out more clearly than ever. In the last analysis this latter cause proves to be the real obstruction in most of the cases where our preventive measures fail. The popular American reaction to such a state of affairs is to "pass a law" about it. We have thousands of laws now that are not enforced and a new one is not what we need. What we do need is to instill into the minds and hearts of the people their personal and individual responsibility for the health of their community.

As Christian people you are taught to "Love thy neighbor as thyself." A practical application of this principle would do away with nearly all the serious epidemics of acute infectious diseases and about two-thirds of the endemic cases.

The opening of the schools in the fall, often means a sharp rise in the acute infections of

childhood; because some selfish parents insist on sending sick children to school, because they do not want them to get behind in their classes. How much better it would be for the child and the community if they would think first of their Christian duty to their neighbors! Often times a child who seems to have one day a slight cold, or an insignificant sore throat, is later found to be suffering from measles, scarlatina, diphtheria, whooping cough or influenza. One day of intimate association of such a child with his schoolmates may cause hundreds of days of illness and suffering, hundreds of days of anxiety for other parents and even a few deaths, with all the misery that is inevitably attached to the useless loss of a promising child. Added to the penalties mentioned is also an immense and unnecessary financial loss. The illness of each person entails the services of at least one attendant. Working days are lost by the sick and by those who attend them, all of which is taken away from the earning capacity of the afflicted family.

How often do we see women attend social functions when they are suffering with acute colds, and the invasive stages of even graver respiratory disease. They often excuse themselves on the ground that their host would be inconvenienced by their absence, or that "one should not disappoint one's friends." It is really hard to see where the spreading of disease among one's acquaintances can be construed into an act of friendship! In the majority of cases the act is one of pure selfishness. The offender does not want to suffer the inconvenience of a voluntary quarantine while ill.

I know a lady who boasted that none of her children had missed a day from Sunday School for two years. In order to continue this record one of her children attended her Sunday School class with diphtheria. Half the members of the class suffered the expense

*President's Address, read before the Fifty-Third Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

and pain of a protective dose of antitoxin—and two others had diphtheria. Later these same children were allowed to spread measles and whooping cough through the same route. To them their enviable record of attendance was dearer than the health and lives of their classmates. A little “applied Christianity” in this case would have been greatly appreciated by the community, and the exercise of a little consideration for others would have been a profitable exchange for the “record” of attendance they would have given up.

Commercial selfishness is responsible for the greatest afflictions in the form of disease, that fall on the human race.

A booming town suddenly finds itself a center of typhoid, smallpox or plague. The city council and the chamber of commerce meet and agree to suppress all news of the disaster. Merchants and real estate dealers join in the crusade of keeping down the truth until hundreds of lives have been sacrificed and untold misery and sorrow suffered. How much more Christian and civilized it would be to acknowledge the trouble at once and begin the vigorous campaign of correction early, instead of selfishly trying to deceive the public!

Epidemics are like fires. They are more easily put out before they have become great conflagrations.

Last, but not the least unchristian and selfish is the doctor who, in order to placate his influential, selfish patients, fails to report dangerous contagious diseases. He is unworthy the trust and confidence of any community, and is really playing the role of incendiary, rather than that of Good Samaritan.

“Applied Christianity” in every case of communicable illness, thinking first of your neighbors and your community, then of the welfare of your own loved ones, will be a financial asset to the nation, a boon to your neighbors and will greatly lessen the sum total of human misery and suffering.

Abstract

PHYSIOLOGY AND MODERN SURGERY

J. Shelton Horsley, Richmond, Va. (*Journal A. M. A.*, June 23, 1928), gives a few instances of the direct bearing of physiologic research on surgical progress. Successful surgery does not mean just the skilful mechanical performance of an operation. It is something even more important than this. It involves

the consciousness of the surgeon that the technical steps are not an end in themselves, but are more or less important guides toward the correction of abnormal processes in living tissue. An appreciation of function presupposes, of course, a knowledge of structure, but a knowledge of structure alone, as of anatomy, may sometimes give an inadequate conception of the real function. Specialism in medicine has advanced knowledge in many respects, but too strict specialism is not without its disadvantages. The arbitrary division of patients into medical and surgical cases is fraught with some danger. Unless one who deals with disease has a broad conception of the underlying biologic processes that go on normally, he cannot hope intelligently to correct the abnormal processes and this is equally true whether the case is surgical or medical. The particular treatment that is employed in the individual case should be indicated by the phenomena of the disease, and not by the desires of the practitioner. It is impossible in the proper limits of an address even to mention all the many instances of the effects that physiologic discoveries have had on the practice of modern surgery. The unfortunate effect of the disregard of physiologic function in surgical operations is seen in the number of instances in which fifteen or more years ago the colon was excised to cure chronic cystic mastitis, goiter or tuberculosis. While undoubtedly there are organic diseases of the colon aside from cancer which demand resection of this bowel, the removal of a colon that shows little disease for the purpose of curing such unrelated diseases as those mentioned was, to say the least, illogical and can hardly by any stretch of the imagination have any basis in disturbed physiologic function. One of the most striking examples of the influence of physiology on modern surgery is in the gastrointestinal tract. The clinical bearing of the recent studies of the physiology of the sympathetic nervous system has not yet been properly evaluated. While much unwarranted enthusiasm has arisen in the clinical application of some of this knowledge, undoubtedly surgical progress has been made in this direction. Knowledge of the biologic processes in the human body is necessary for any one who attempts to restore health, particularly if such a restoration involves mechanical procedure which because of their very obviousness may obscure the biologic principles underlying them.

Editorial

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OF THE
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WILLIAM R. BATHURST, Editor
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All communications of this Journal must be made to it
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Notice of deaths, removals from the state, changes of
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OUR PRESIDENT’S ANNUAL ADDRESS

It was a matter of regret to all who attended
the recent El Dorado meeting of the Arkansas
Medical Society that our President, Dr. Henry
Thibault, was unable to attend because of ill-
ness. However, his address was read by the
First Viece-President, Dr. Homer Scott. It
contained matters which should have the most
careful attention and the co-operation of
every physieian in correeting the evil of con-
ealing contagious diseases.

Espeeial referenee was made in the address
to the ignorance on the one hand and selfish-
ness on the other, which result in the disease
spreading which could be avoided, but for
these factors.

There are physieians who connive at these
evasions of the preeautions, sanetioned by law,
by failing to report such eases and failing to
have posted the house in which the patient
lives. It is hoped that such connivance is rare,
but instanees occur beyond all eavil. The
physieian perhaps salves his conseienee by ae-
cepting promises of parents that other chil-
dren of the family will be kept from school
or that such members of the family who are
employed in stores or offiees shall be kept
rigidly away from the patient’s room. But
these promises are sometimes violated. If
they were to be faithfully kept, there would
be less reason for observing seereey.

Dr. Thibault cites an example, that of a
woman who taking pride in her little daugh-
ter’s unbroken attendanee record at Sunday
School, let her attend when she was suffering
from diphtheria. The result was that the dis-
ease was spread throughout the elass. One of
the lessons likely to be received at Sunday
School is that of the commandment, “LOVE
THY NEIGHBOR AS THYSELF,” and
another is the golden rule, “DO UNTO
OTHERS AS YOU WOULD THEY
SHOULD DO UNTO YOU.” Yet, beeaue
of a foolish pride in her daughter’s record,
this proud mother was willing to risk spread-
ing disease broadcast among a lot of innoeent
children and perhaps with some fatalities.

Another angle is touehed upon by President
Thibault in the matter of purely selfish ef-
forts fostered by some communities, in having
the newspapers suppress, if possible, publica-
tion of the presenee of such diseases as small
pox or typhoid. Sometimes the newspapers
are impressed with the commereial losses by

such publications tending to keep trade away from the city. In other cases there is an understanding fostered by commercial bodies, not to report such cases to the papers. This is not to charge that Little Rock has been guilty of such suppression of facts in the interest of business, but that there have been such instances in many cities is unquestionable.

DISEASE PREVENTION CAN ONLY BECOME EFFECTUAL BY STRINGENT OBSERVANCE OF ALL LAWS AND PRECAUTIONS TO THAT END.

In President Thibault's address to the House of Delegates he stresses the importance of legislative duties, especially with reference to the Basic Science Act, attention of which has been advocated by the Journal for the past two or three years, and which has been discussed at the more important medical meetings in the State and at the previous meeting of the Council. Dr. Thibault asks that Dr. Mann, the new president, and the Committee on Medical Legislation for the coming year have the backing of the entire body and that every effort be made to get petitions signed by counties by the time needed to insure the proposed law being voted upon.

Each member should be urged to get the signatures of at least ten of his patients to his petition, then sign it himself and mail it to the Secretary or the Chairman of the Legislative Committee.

If this is done the Committee will have some ammunition in their pockets when they approach the Legislature.

Included in Dr. Thibault's message is a recommendation that since has had the endorsement, not only of the House of Delegates, but other organizations of the State, is to commend in full the program of the State Medical School. This program contains the building and maintenance of a Charity Hospital. The need of such an institution has reduced itself to an emergency, and the need of such a hospital as a humanitarian institution is too well known to us all.

Another recommendation is made in the president's address to the House of Delegates is, for the present at least, that the Committee on Health and Public Instruction be made to include the Committee on Cancer Control and the Committee on Infant Welfare, and should be provided with sufficient funds for necessary publicity.

Both of the addresses of the president will be found in this issue of the Journal and they are commended to our readers as well worthy of perusal and of earnest attention.

In conclusion, the Journal is sure that it expresses the feelings of the entire medical profession of Arkansas in hoping for the speedy recovery of Dr. Thibault and the sincere hope that he will be spared for many years to remain a most useful member of the Arkansas Medical Society and of untold benefit to his patients.

A form suggested by Dr. Thibault is as follows:

PETITION

"We believe that every person desiring to practice any form of healing on human beings should be required to pass an examination in the following basic sciences before being allowed to take the examination before the board representing his school of practice; anatomy, physiology, chemistry, bacteriology and pathology.

We, all citizens and voters in..... County, Arkansas, therefore pray that the present Legislature pass a law requiring all applicants for license to practice any form of healing of human beings to pass a creditable examination in these basic branches, before a non-medical board before they are examined by the board representing their school of practice.

Signed.....

.....
.....

PROCEEDINGS
OF THE
FIFTY-THIRD ANNUAL SESSION
OF THE
Arkansas Medical Society

El Dorado, May 11, 12, 13, 1928

HOUSE OF DELEGATES

First Day

Tuesday, May 1, 1928

The House of Delegates was called to order at 9:30 a. m. by the First Vice-President, Dr. Homer Scott, President Thibault being absent on account of sickness.

The Chairman appointed the following Credentials Committee: Drs. Cothorn, Fowler and Dunan.

After a recess of a few minutes, this committee made the following report:

Your Credentials Committee wish to report that the credentials of the delegates are in good form and correct, and that a quorum is present. We recommend that where the regularly elected delegate and alternate are absent any member from said county may be seated as a delegate."

On motion, the report was adopted.

The Chairman: We will dispense with calling the roll and take the attendance cards in lieu thereof.

On motion the minutes of the Fifty-second Annual Meeting as published in the July, 1927, issue of the Journal were adopted.

The Chairman appointed the following as the Reference Committee: Drs. Geo. B. Fletcher, M. E. McCaskill and M. L. Norwood.

Dr. Wharton, 2d Vice-President: In the absence of our President, Dr. Thibault, who is ill. I wish to introduce to you Dr. Homer Scott of Little Rock, 1st Vice-President, who will preside at this meeting, and he will now deliver his message to you. (Applause).

Chairman Scott: I haven't a message. I only have Dr. Thibault's message. The latter part of last month I received a letter from Dr. Thibault telling me that he would not be able to attend, and asking me to come down and

try to take his place. As you all know Dr. Thibault so well, nobody can take his place. However, I insisted and he very gladly complied with my request that he write his message to the House of Delegates. I told him I would read it.

To the House of Delegates of the Arkansas Medical Society:

It is beyond my powers to express to you my disappointment in not being able to attend this meeting in person. For the first time in the honorable history of this Society has one, whom you have honored by making him your President, "laid down on the job." I can only remind you that in spite of frequent losses of far abler men than myself the Arkansas Medical Society has steadily and honorably "carried on." At this meeting it will not fail to repeat itself under the direction of our First Vice-President, Dr. Homer Scott. To me is the loss; to me the loneliness of the broken habit of a professional lifetime; the deep regret of one who must lay aside the tools to which his habit has become accustomed and that at a time when he just begins to feel pride in his proficiency to use them.

Sensible of the great honor that you have conferred on me, let me predict that the Arkansas Medical Society, which constantly renews its youth by the influx of new and younger members, will continue to wax strong and will ever hold a higher and higher position of honor and respect in the minds of the people and in the esteem of the medical profession of the country.

Your legislative duties are simple, but vital. The Basic Science Act has been discussed at length in the Journal. To you the necessity of such an act is patent. Your duty is to see that the incoming President and the leg-

islative committee have the moral backing and the funds to get these petitions circulated, signed and assorted by counties, by the time that they are needed.

The need of a State General Hospital has reduced itself to an emergency. Dr. Vinsonhaler, the Chairman of the Legislative Committee and Dean of the Medical School, will discuss its relation to the teaching of medicine in Arkansas. The need of such a hospital as a humanitarian institution is too well known to us all.

The proposed amendment to the Constitution. If this proposed publicity committee is to put before the public proven methods of preventive medicine which require the cooperation of the public in order to be effective, it would be useful if we did not already have a committee, (the committee on Health and Public Instruction) for the same purpose; but if it is contemplated to create this committee as a "bally hoo committee" to compete with the broadcasting unit of the Palmer School of Chiropractic, it has no place in the Arkansas Medical Society.

I suggest that the Committee on Health and Public Instruction be made to include the Committee on Cancer Control and the Committee on Infant Welfare and be provided with funds for any necessary publication.

At the meeting of the Council December 15, 1927, a motion was passed stating that "It is the sense of the Council that the advertisements of physicians appearing in the Journal should contain no more than the name, office address, office hours and the specialty practiced by the advertiser." Such statements as, "Radium stock sufficient for all treatments," "Bone and Joint Surgery, Correction of Deformities and Fractures, Brace Shop for all kinds of braces and splints," certainly are widely divergent from this simple and decent rule. Your attention is called to this in the hope that you will exert your moral influence against our ever entering an era of competitive advertising. Under such a regime of competitive advertising the condition would soon be that "I am known to others not by merit nor by worth, but by my bally hoo, saith the doctor."

I want to thank the Council, our efficient secretary, the officers and the members of the various committees for their efficiency in carrying on the work of the Arkansas Medical Society during the past year. I have been able to do very little and the success of this meeting will be due entirely to their efforts.

Dr. Wharton, 2d V. P.: This address of the President will be referred to the Reference Committee.

Reports of the various standing committees were next in order, as follows:

SCIENTIFIC PROGRAM

R. J. Calcote, Chairman

Dr. Calcote: Our report has already been placed in your hands. We believe it is a good program. We are sorry that Dr. Jabez N. Jackson of Kansas City, Mo., President of the American Medical Association could not be with us. We had a message from him at the last moment that he couldn't attend this meeting. That was after our first program was given to the press. We want to call your attention especially to some of our out-of-State visiting guests. Dr. Stern, of Memphis, will deliver an address this afternoon on "Heart Failure." Our Public Session tonight will be addressed by Dr. Boswell, of Mississippi. We trust it will be well attended.

We hope you will enjoy every minute of this program.

SCIENTIFIC EXHIBIT

C. E. Oates, Chairman

Dr. Oates: We had hoped to get something from every hospital in the State that we could assemble in one exhibit here showing to us all how and what the profession is doing in hospital work. I have heard from very few hospitals, but we will have some exhibits from hospitals, but I fear that only the larger hospitals, such as St. Vincent's Infirmary and the Missouri Pacific Hospital will have an exhibit here. It was my hope that we would have exhibits from small hospitals back in the country—and they are really doing good work; but I couldn't say whether we will have exhibits from those hospitals or not, as I have not heard from them. We will have probably some records of Dr. Melson, of Little Rock, and we have some x-ray plates from one of the hospitals here. We also have some brain models from the Arkansas University School of Medicine and some preparations of brain sections that have been prepared there at the University of Arkansas according to plans or specifications worked out by Dr. J. S. Nicholas of the University of Pennsylvania.*

We have also a freak of nature there that would probably be interesting to some of you, a four-winged and four-legged chicken with one head, that was picked up about ten days ago in Little Rock. I don't know what it takes for a city to produce that kind of chicken.

*"Neuro-Anatomical Preparation;" Anatomical Record, 1927, Vol. 36, pp. 199-202.

MEDICAL LEGISLATION

Dr. Frank Vinsonhaler, Chairman

DR. VINSONHALER: Mr. President and Gentlemen of the Society: The Committee on Medical Legislation has not functioned in the last year. I mean by that, there has been no opportunity for the committee to do any sort of work. Dr. Thibault asked me to serve as chairman of the Committee on Medical Legislation. I consented to do so because I knew that it would not require any work on my part. Now comes Dr. Mann and a few other conspirators and ask

me to take this position for the ensuing year, very unwisely, I think. I have consented to do so. After consulting with our secretary here, whom I want to declare equally guilty as an accessory to the fact, and Dr. Thibault, those gentlemen both advised and asked me to accept Dr. Mann's request, which I have done.

I looked forward to this meeting with a great deal of interest and anxiety for the reason that I wanted to discuss with you the work for the ensuing year in the Legislature. There are a few propositions in which the Arkansas Medical Society is vitally concerned, and especially the basic science law which has been published in the Journal, with which you are all familiar, and the advantages of which any one can see at a glance.

In the first place, it is the easiest kind of law to pass, because it requires all to become equal; there is no one that is to have any advantage in the eyes of the laity, in the passage of such a law as this. We are betting on the fact that, when a man has studied for two years, passed the freshman and sophomore year and becomes familiar with the basic sciences that he will have sense enough by that time to go the rest of the way straight. I think that is a safe bet. And the very fact that we approach the subject from that standpoint gives it an element of fairness that will appeal to the Legislature and to the people of the State.

Now, it is one thing to propose a law like that and another one to carry it into effect. There are some old members here who helped pass the old law under which we are now operating; that is, the three cult law. I think some of the experience that they received at that time would be very valuable on this occasion, and I hope that they will give this law their earnest support, and I am quite certain that they will.

I am going to ask Dr. Mann, who is our incoming President and who is vitally interested in this proposition, to take the opportunity of following me and explaining some of the advantages and of the assistance that the profession is expected to render in the next Legislature. I will say this to you: It does not make any difference whom you put at the head of your Committee on Medical Legislation, not at all; but the difference will come in in the indifference with which the profession will regard or may regard the passage of this law. In other words, in the hands of the profession of the State rests the success or failure of this effort to enact the basic law.

Nebraska has this law and Connecticut has it. Connecticut is said to have the best basic law. Now, exactly what the difference is between the Connecticut law and the Nebraska law, I do not know.

When I first read this law, I was mystified when I read what was called the "saving clause." I don't know whether or not any of you have been puzzled by that clause of the basic law. When I read it, I simply said to our secretary here that I could not understand why anyone would want to pass a law like that, because I got the impression from reading the saving clause that the various examining boards would absolutely ignore the basic law and go ahead and examine the candidates anyhow. I found that I was mistaken in the wording of the clause. All candidates for the degree of Doctor of Medicine must pass examination under the basic law. And this board, I believe, is to be made up of men who are not identified actively in the practice of medicine or in the teaching of medicine. That is another element of fairness that will appeal to the people of the State.

Other States have tried out the basic law. Some are perfectly satisfied with it; others are not. It is a matter to be looked into and to be cared for by the Committee on Medical Legislation and by such developments as may occur in the passage of the bill.

Now I am coming to a subject that is dearer to my heart than anything else; that is, a State Charity Hospital. We have been agitating this question for some time. Dr. Smith has endeavored to secure a State Charity Hospital, and had the thing practically through, except for some defective wording of the law, which enabled the State government to take away what had been segregated for the State Charity Hospital and use it for the penitentiary. This law would have settled the question. We would have now a State Charity Hospital, except for that. We expect to have our bill for a State Charity Hospital scrutinized by individuals who will be enabled to see any defect that might creep into the law, in such a way that, if it is passed by the Legislature, it will stand the test and whatever appropriations may be made will be kept for the State Charity Hospital.

When it became known through the newspapers that the State Charity Hospital was being agitated, I had a letter from an old gentleman living not far from Des Arc. He said, "Dear doctor, you are doing a great thing. Your medical society is doing a great thing." He said, "We people get sick over here and we ain't got any money, we ain't got any place to go to, and their ain't nothing left for us to do but to lay down and die." I was struck by this plain matter-of-fact statement of the condition of things in the community in which this man lived, and such conditions apply all over the State. While that phase, of course, appeals to the public, it is not the one entirely that the medical school is interested in. Our views are not entirely altruistic. We desire a State Charity Hospital for teaching purposes, in order that our institution may comply with the requirements of an "A" grade medical school, which states that every "A" grade medical school shall have absolute control over a hospital of at least 100 beds.

We are existing by the indulgence and good humor of the Council on Medical Education. Any time they see fit to change their mind, they can embarrass our institution very much; they can reduce it from an A grade medical school to a B grade, which would mean the destruction of the institution.

We, therefore, are interested in securing as rapidly as possible this hospital, with a view to complying with the requirements, and making our State institution an "A" grade institution in fact, and one that can endure permanently as such.

Now, while I have this opportunity, I want to state to the delegates here that the medical school is contemplating a post-graduate course to follow the end of our regular course; that is, three weeks of intensive post-graduate work, and to invite the profession of the State, such as desire to visit our institution, to come and take part in this post-graduate work. We extend an invitation to the members here present. I would like to hear from the delegates and from the Society how they regard this move on the part of the medical school. I would like very much if every man could have the opportunity of just addressing you.

Dr. Bathurst: What is the attitude of your Committee on Christian Science?

Dr. Vinsonhaler: I don't think they are entitled to any consideration. I would merely ignore

them. I wouldn't say anything about them at all.
Dr. Bathurst: They are very much interested in it.

Dr. Vinsonhaler: I would not consider Christian Science, so far as I am personally concerned, unless the wishes of the Society are otherwise. But I would certainly advocate that every one else, the osteopath, the chiropractors and the others—I don't know the different cults but there are many of them—pass the basic science examination.

I attended a meeting of the Council on Medical Education in Chicago in February, and I was the only man present from Arkansas. We did not get a very warm reception there on account of conditions that exist in this State. There are some very bad conditions that exist here, which we must rectify, and the basic science law offers an opportunity to get rid of them for all time. (Applause).

Vice-President Scott: We would like to hear from Dr. Mann.

Dr. Mann: Mr. Chairman and Gentlemen: In looking over and seeing what could be done and what was needed very badly to correct the conditions existing in Arkansas in a medical way, I find that a few things are needed. We first need a good law; second, we need a good school; third, we need to take care of the unfortunate people existing in the State who now have no means whatever of receiving hospital or medical attention. Now, in going to the Legislature and asking them to pass a law which is as stringent as the present law is, they answer us by saying that "we have not now enough physicians, and we favor lowering the requirements of a medical practice law." So, to overcome that condition and do the thing so badly needed, we have what I consider a three feature proposition. First, a medical school with a charity hospital, so that any man's boy can become a doctor or any man's girl can become a nurse, and these boys and girls can come from their rural communities and receive medical education in their own State, supported by their own people, to care for the needs of the sick within the State, so that then we will have as good doctors and as good nurses as we, in paying taxes to support this school, should have. That meets that objection in a legislative way.

Then we can also go to these people and say that we want good laws to protect your boy and your girl when they are doctors. Now, that is the program. How to carry it out or whether it can be carried out is a different thing. I will say this very frankly: if this Society and if the doctors of Arkansas will do their part, or half way do their part, when this Society meets next year we will come to you with all of these laws on the statute books. (Applause). I grant you it is a formidable proposition. It means a terrific fight, and the battle is either going to be won or lost before the August primaries.

Now, to carry on this program is going to require money. Please don't forget that. We have some money in the treasury. It is going to require sacrifice and effort, enormous sacrifice and effort, on the part of some members of the medical profession in this State, and I sincerely hope that if you adopt this program, you will put at the disposal of a suitable committee, or somebody, the necessary funds to carry out the program. I don't know just how things would happen; I don't know just how they would work out. It may turn out better than when I was elected president this time. I didn't know down in Miller County, when

I was elected president of our levee board and our drainage district and got an intimate knowledge of the Arkansas Legislature for the past fifteen years, that I would have to be turning around and facing the problem in a medical way; but I am. I know the Arkansas Legislature and I know what can be done.

Dr. Vinsonhaler accepted this proposition, but he didn't accept it just to be chairman of the committee. He is really one of the first volunteers in the move. He probably will be speaking in every county in this State before the campaign is over. He has agreed to roll up his sleeves and go to work. (Applause). There is going to be some of the other boys who will do their part. And if you endorse this program, please don't stint us as to funds, but go as far as you can go. Now, that is what I am after, because we may have to hire lawyers, we may have to do things in an advertising way to put this bill over, and we want some of our members around this Legislature. He is not the only man on the committee, you know. There are some of these other men who will have to spend some time in Little Rock next winter and we want to pay their expenses. If you endorse the program, please put the money at our disposal somehow. I want to thank you.

NECROLOGY

Dr. F. A. Corn, Chairman

Secretary Bathurst: Dr. Corn is not present. He will preside at the Memorial Session which will be held in the First Baptist Church tomorrow.

The reports of the Committees on Health and Public Instruction, Infant Welfare, and Hospitals, not being ready they were deferred.

ARRANGEMENTS AND ENTERTAINMENT

Dr. H. H. Niehuss, Chairman

Dr. Niehuss: Your program gives you a pretty good outline as to the entertainment that is to be furnished. We have done the very best we could to entertain you folks and to give you good accommodations. The Public Session this evening at the High School auditorium will be a treat, including as it does, addresses by Drs. Boswell and Dicken.

The Memorial Services tomorrow forenoon at the Baptist Church. A good program has been arranged for that meeting.

Then the President's reception will be held in this room, and dancing also.

There will be an automobile drive tomorrow at one o'clock. There will be ample accommodations for any of the doctors or their wives who wish to see more of the city or surrounding territory or oil fields.

The golf country club can be easily reached on the north side of town, and our guests are welcome to all of the privileges.

REPORT OF COUNCIL

Dr. Thomas Douglass, Chairman

(Proceedings of Council at Mid-Winter Session December 15, 1927, published in Journal, January, 1928, P. 160).

Chairman Scott: This report will be referred to the Reference Committee.

Report of the State Board of Examiners was deferred, the chairman not being present.

REPORT OF DELEGATE TO THE A. M. A.

Published in Journal Arkansas Medical Society, June, 1927, p. 19.

Supplementary report of Dr. H. D. Wood as follows:

To the President and Members of the Arkansas Medical Society:

As your delegate to the American Medical Association, I will make a supplemental report in writing, as Dr. Bathurst will make an oral report that will be much more interesting. But there are a few things to which I wish to call your attention; as this is the first time that I have had the honor of being a delegate to this Association. I was present at every meeting of the House of Delegates and was pleased to see how well this part of the American Medical Association did its work.

The House of Delegates convened in the Auditorium of the Medical Society of the District of Columbia and was called to order by the speaker, Dr. F. C. Warnshuis, of Michigan. Dr. Warnshuis is a most excellent presiding officer and managed to keep a bunch of doctors at work and under control, who, no doubt, had been accustomed to having things go their way when at home.

In his address, the speaker said "that he desired to emphasize the Standards for Surgeons that the American Medical Association points with pride and justly boasts that it is the first to seek out conditions that lead to reprehensible medical practices. It has continuously sought to maintain its house in order and to anticipate undesirable tendencies for the purpose of circumventing untoward actualities."

With a membership of 94,000 of the 150,000 physicians in these United States, this Association is a power for good for more than 100,000,000 of its inhabitants. But he mentioned this fact: "In the present trend of events, conditions exist wherein all trades and professions are confronted with enticements to yield to commercial and selfish inducements and to ignore high and lofty principles. Never has it been so easy to go astray. It would not be surprising if the medical profession, in common with all other professions and trades, should reveal 1 or 2 per cent of its number as having yielded to impinging temptations. Representing 150,000 physicians. 1 per cent would constitute 1,500 physicians, a not inconsequential number. For their omissions and commissions the profession as a whole may be judged and appraised by the unthinking and intolerant. Let us, however, take cognizance of that condition and tendency, increasing our vigilance and action to minimize it to its lowest possible extent."

Such words are worthy of our serious consideration, if we are to continue to maintain a high standard of professional ethics. And in harmony with such expressions of high standards by the speaker of the House of Delegates, may I call your attention to the fact that he overruled a motion to amend Section 1, Article 5, of the Constitution of the American Medical Association offered at the Dallas meeting, giving the House of Delegates power to discipline or expel a member of this Association or a fellow of the

Scientific Assembly on recommendation of the Judicial Council.

Several speeches were made for and against this amendment. One member speaking against the amendment became very much wrought up and said, "You give the House of Delegates power to expel a member from the American Medical Association and you will give it the power to elect any one to membership in this Association." I said to my associate, Dr. Bathurst, "Answer that part of his speech." He said, "You answer him." As no one seemed willing to reply to such logic, I stood up and gave my name and pronounced the name of my State and was recognized by the speaker. It was with some hesitation and a bit of embarrassment that I did what I had never thought I would do, make a speech in the Capitol of our Nation. I said, "Does not the gentleman who has just spoken know that the United States Senate has the power to expel any member from its body for unbecoming conduct, and does he not also know that the United States Senate has no power to elect any one to membership in its body." Cheers went up all over the house after my little speech.

There were 156 who answered to roll call after the House of Delegates went into executive session.

The speaker asked all who favored the amendment to stand up and remain standing until counted. Dr. Olin West, the Secretary, announced there were 101 voting for the amendment. The speaker then asked all who were opposed to the amendment to stand up and be counted. There were just two who had the courage to stand up and be counted against the amendment. To my great surprise the speaker said, "The amendment is lost." I was so dumfounded by such a decision that I opened not my mouth.

Had the speaker announced his decision before calling for the negative it would have been all right as three-fourths of those who answered to roll call did not vote for the amendment. But when he called for those who were opposed to the amendment to vote and only two voted is where he was wrong, as many times more than three-fourths of those present and voting were in favor of the amendment.

I feel like the Arkansas Medical Society should register a protest against such a ruling.

I was glad to be present and listen to many things discussed by this House of Delegates for the betterment of the American Medical Association and the millions of our people who are looking to it to lead them in the right way in medical and surgical matters.

Editors Note:—(There were 103 votes cast, of which 101 were affirmative and two were negative. To amend the Constitution requires three-fourths of the votes of the delegates registered at the session. As 117 votes were required for adoption and as only 103 were cast, the proposed amendment was lost.)

REPORT OF SECRETARY

To the House of Delegates, Arkansas Medical Society:

The Arkansas Medical Society has had another year of progress and financial prosperity. Our organization daily becomes more useful, not only to its members, but to the public at large, in the prevention and cure of diseases and in adding comfort to life.

I wish to include in my report an expression of appreciation for the loyal support and co-operation

given by Dr. Calcote and his associates in presenting the program for this meeting.

The membership at the close of 1927 numbered 1160, and for 1928 we have 1050 members. Another high mark for this time of the year. A complete list of members, by counties, will appear in the November Journal.

During the past year, the Journal has published more pages of reading matter and more high class advertisements than ever before. The income from this source exceeds \$4,100.00

The money collected in 1923 for the Gorgas Memorial is still held by the Secretary until we are advised by the American Medical Association that the Gorgas Memorial is on a permanent basis. With the accumulated interest to date the amount has increased to \$197.12.

Our financial statement shows:

Cash on hand at close of the last session	\$11,676.46	
Received for dues (since last Session)	\$3,649.00	
Received interest Secretary's account	45.93	
Received interest Treasurer's account	200.50	
Received interest Journal's account	95.44	
Received interest Student Loan Fund	29.22	
Received Advertising in Journal	4,150.42—	8,170.51
	\$19,846.97	
Current expenses (list attached)	\$ 6,930.43	
Cash on hand	\$12,916.54	
Notes Receivable, Student Loan Fund:		
1926	\$250.00	
1927	250.00	
1928	250.00	750.00
Balance to date	\$13,666.54	

Respectfully submitted,
Wm. R. Bathurst.

Secretary Bathurst: I would like to include in addition to my report, report of the Student Loan Fund Committee.

REPORT OF COMMITTEE ON STUDENT LOAN FUND

To the House of Delegates, Arkansas Medical Society:
Gentlemen:

The Committee on Student Loan Fund continues to function according to the rules governing its administration, as published in the Journal, July, 1926.

During the past year, we made an additional loan of \$250.00 to the student previously reported. This makes his entire loan \$750.00. He will graduate this year, and has had a year's internship in one of our best hospitals. This summer, he will fill an appointment as intern in one of the leading hospitals in New Orleans.

His progress and conduct is in keeping with the splendid recommendations made by his sponsors when the loan was authorized.

Respectfully submitted,
E. F. ELLIS, Chairman,
H. THIBAUT,
Wm. R. BATHURST.

REPORT OF TREASURER

Arkansas Medical Society, for the Year May 11, 1927 till May 1, 1928

My records show the following:

Balance reported at annual meeting May 11, 1927	\$ 4,078.45
Receipts for the year:	
7-1-27 Interest on Savings Account	\$ 58.55
1-1-28 Interest on Savings Account	141.95
Total interest on Savings Account	\$200.50—\$ 200.50
8-25-27 Interest on Student Loan Fund	\$ 11.85
1-31-28 Interest on Student Loan Fund	17.37
Total interest on Student Loan Fund	\$ 29.22—\$ 29.22
7-2-27 Received from Secretary	\$ 7,598.01
Total	\$11,906.18
Disbursements: Vouchers No. 248 to 274, inclusive	\$ 6,930.43
Balance on hand May 1, 1928	\$ 4,975.75

R. J. CALCOTE, Treasurer

Secretary Bathurst: I would like at this time under New Business to introduce the following resolution:

We, the House of Delegates of the Arkansas Medical Society, this day assembled, have learned with the sincerest regret of the serious illness of our president, Dr. Henry Thibault, and our ex-president, Dr. Geo. S. Brown; therefore be it

RESOLVED, that we extend to them our warmest sympathies and express our fervent hope of their speedy and permanent restoration to good health, and assure them that their presence and counsel are indeed greatly missed at this our annual meeting.

On motion, adopted.

Dr. Wharton: I would like to move that each of these gentlemen be sent a telegram expressing our regrets.

Adopted.

Secretary Bathurst: Under New Business, I would like to read a letter from Dr. James W. Kennedy, of Joseph Price Hospital, Philadelphia.

April 26, 1928.

Dr. William R. Bathurst,
Little Rock, Arkansas
My Dear Dr. Bathurst:

I have just received your program of the Arkansas Medical Society for its Fifty-third meeting. I want to congratulate your Society on the stand it is taking in regard to the adoption of the draft of a basic scientific law. This is a splendid move and I regret more of the States have not done likewise.

Since the birth of Caesar there has been no greater State or National neglect than has been shown by the lawmaking bodies in regard to the proper protection of the regular practitioner of medicine and the price paid has been millions of lives uselessly sacrificed. When the Mayors of our Cities, Judges of our Courts and Governors of our States are employing the irregulars, what can we expect from the rank and file. The mortality in many conditions is ninety per cent higher than it should be. This is the difference between privileged medicine and that which has come through ignorant conduct of the sick to which our State laws have largely contributed through their neglect to protect the regular profession. If we are not to have one standard of medical education due to the ignorance of medical legislation, then the basic scientific act is the best substitute which today presents itself.

I remember with profit and pleasure my attendance to your State meeting on two occasions and extend my best wishes to your organization.

Faithfully,

J. W. KENNEDY.

Secretary Bathurst: I have also a letter from Dr. Frank B. Young, ex-president of the Arkansas Medical Society.

Gering, Nebraska

April 27, 1928.

Dr. W. R. Bathurst, Secretary,
Arkansas State Medical Society,
El Dorado, Ark.

Dear Bathurst:

When I learned that the meeting of the Arkansas Medical Society was to be held in El Dorado this year I had hoped to be able to attend, but personal and business matters make it impossible for me to do so. You will remember that I was President of the Society at the previous El Dorado meeting, and the memories of that time inspired the desire to again visit that hospitable community with the medical profession. It was my expectation to make my annual visit to my mother in Springdale this spring and from there go to the meeting, but I had to make that trip in February and cannot come to the meeting now.

So I hereby send greetings to my old associates and best wishes to the Society as a whole and to its members individually. I wish that I might be there to greet my many old and true friends and to meet the newer men who are now active.

I realize though that so many of my friends have passed to their reward that my visit would be tinged with sadness. I often think of the change, and wonder if the change would have been so noticeable had I stayed in the State and attended the meetings as regularly as I did while living there.

Here is the wish of success to the Arkansas State Medical Society, and of happiness and prosperity to its individual members.

We live on the North Platte Highway, an excellent road and a short cut, through the most beautiful valley in the world, from the Lincoln Highway on the east to the Yellowstone Highway to the northwest; so if any of the Arkansas doctors come this way on their vacation trips, they will find a real old time Arkansas welcome awaiting them. The fact is, Bath, the worst feature

of living in this country is being so far away from our old time friends.

Sincerely yours,

F. B. YOUNG.

PERSONAL: P. S. Tell St. Cloud Cooper that I hope they have painted the bottom tread and riser of the Garrett Hotel steps some other color than white.

Secretary Bathurst: I have a letter also from the Secretary of the Texas Medical Society.

STATE MEDICAL ASSOCIATION OF TEXAS

Fort Worth, Texas, April 27, 1928

Dr. J. K. Smith,
Texarkana, Texas.

Dear Doctor:

This letter will serve as your credentials as Fraternal Delegate from the State Medical Association of Texas to the Arkansas Medical Society, which meets, I believe, in El Dorado, Arkansas, May 1-2-3, 1928.

You will extend to the officers and members of the Arkansas Medical Society the felicitations of our President, Dr. Joe Gilbert of Austin, and the best wishes of the medical profession of Texas, not only for a pleasant meeting, but for a satisfactory and prosperous future.

I believe there are no special instructions.

Fraternally yours,

HT-EG

HOLMAN TAYLOR, Sec.

Dr. Allbright: If I am in order, I have a resolution sent by the White County Medical Society that I would like to present at this time.

Searcy, Ark., April 5, 1928.

To the Arkansas Medical Society:

Greeting:

WHEREAS, it has been generally known within the medical profession of Arkansas, U. S. Veterans Bureau at Little Rock, does not accord adequate consideration to testimony from the members of the medical profession of Arkansas, relative to compensation claims of U. S. Veterans, and that the attitude of the Bureau, towards such testimony amounts practically to contempt.

THEREFORE, BE IT RESOLVED, that this Society go on record, resisting the attitude of the U. S. Veterans' Bureau, and be it further

RESOLVED, that the White County Medical Society, call on the State Society to use its influence in securing for the reputable physicians of the State consideration regarding such information, or otherwise refrain from asking such testimony of them.

Done by order of White County Medical Society, in regular session, at Searcy, April 5, 1928.

L. E. MOORE, President

F. P. HARDY, Secretary.

Secretary Bathurst: I don't know just what disposition should be made of a resolution of this kind. It seems to me that this should be referred to the Reference Committee.

Chairman Seott: I feel that a matter like that might be discussed by the House of Delegates and then referred to the Reference Committee. I am going to ask if there is any discussion. I see one man connected with the Veterans Bureau present here. He might wish to have something to say. Does anybody wish to discuss it?

I would just like to say, from my personal acquaintance with the physicians of the Veterans' Bureau, that I feel that the White County Medical Society has taken a somewhat unjustifiable attitude towards the physicians in Little Rock. I don't believe that any one of these men in that Bureau are treating the laity with any contempt or otherwise. If there is anything of that apparent, it must come from somewhere else than from the Little Rock office.

Dr. Gann, Sr.: I move that the resolution be referred to the Reference Committee.

Carried.

Dr. T. G. Porter: I was requested by the members of the Ladies Auxiliary, as they work under the supervision of the Arkansas Medical Society, that they be granted the privilege of starting a Students' Loan Fund, something similar to the one this organization has, and they want the endorsement of the Society before taking up their work, and I was asked to put it before the House of Delegates in the form of a motion that they be permitted the privilege of starting a Students' Loan Fund in their organization.

Carried.

Chairman Seott: The next order is the proposed change in the Constitution and By-laws.

RESOLVED, That the Constitution and By-Laws be amended so as to include a Publicity Committee.

THEREFORE, The following amendment is proposed to add to Chapter VIII, Section 1, page 19, to include among the standing committees, that of "A Committee on Publicity."

Chairman Seott: Any discussion on that?

Secretary Bathurst: No one seems to want to endorse it. It occurs to me that, before we make any radical change in our Constitution and By-Laws as to a new committee, it would be well to try it out for a year or two. My suggestion is that, instead of making a radical change, we suggest to the incoming president to appoint a special Committee on Publicity and try that out for a year or two and, if it becomes a success, then make it a standing committee. We might find in a year or two

that there might be a mistake in having a Publicity Committee.

Chairman Seott: What's the difference between a Publicity Committee and the Committee on Health and Public Instruction?

Dr. Mann: I hope in some way we can have a Publicity Committee for the next year. I don't mean an unethical committee. It is entirely different from the Committee on Public Health and Instruction. I think there will be some things we want to say to the people of Arkansas, not in a way that is unethical, and yet in the way of putting our side of the proposition before these people. We have to go to them somehow and have to go to them very soon, in advertising the profession or in trying to tell them just what we want for their good, for the good of the two million people living in this State. We are going to have to convince them that we are right, and I hope something of that kind can be done.

Secretary Bathurst: If there is nothing before the House, I will introduce a motion that we have the incoming president appoint a special Committee on Publicity and not to make it one of our standing committees until we see what success we have with it.

Carried.

Chairman Seott: That settles the proposed change.

The selection of the Nominating Committee being in order, the following were chosen:

PERSONNEL OF NOMINATING COMMITTEE

First Councilor District—W. M. Majors, Paragould.

Second Councilor District—O. J. T. Johnston, Batesville.

Third Councilor District—T. G. Porter, Hazen.

Fourth Councilor District—J. M. Lemons, Pine Bluff.

Fifth Councilor District—J. A. Moore, El Dorado.

Sixth Councilor District—M. L. Norwood, Lockesburg.

Seventh Councilor District—C. T. Drennen, Hot Springs.

Eighth Councilor District—J. H. Sanderlin, Little Rock.

Ninth Councilor District—J. H. Fowler, Harrison.

Tenth Councilor District—Thos. Douglass, Ozark.

On motion, the House of Delegates adjourned until the last day, Thursday, at 1:00 o'clock, P. M.

HOUSE OF DELEGATES

Last Day

Thursday, May 3, 1928.

The House of Delegates was called to order by the Chairman, Dr. Seott, at 1:00 P. M., a quorum being present.

The report of the Nominating Committee was the first order of business.

President-Elect

Thad Cothorn, Jonesboro.
E. E. Barlow, Dermott.
Thos. Douglass, Ozark.

First Vice-President

H. H. Niehuss, El Dorado.

Second Vice-President

O. M. Bourland, Van Buren.

Third Vice-President

Sam J. Allbright, Searcy.

Treasurer

R. J. Calcote, Little Rock (re-elected).

Secretary

Wm. R. Bathurst, Little Rock (re-elected).

Delegate to the A. M. A.

Homer Scott, Little Rock.

Councilors

Second District: L. T. Evans, Batesville.
Fourth District: W. T. Lowe, Pine Bluff (re-elected).
Sixth District: C. A. Archer, De Queen.
Eighth District: Anderson Watkins, Little Rock (re-elected).
Tenth District: S. J. Wolfermann, Fort Smith.

Thereupon, the Chairman appointed Drs. Thompson, Rhinehart and Johnston, tellers, and the House of Delegates proceeded to ballot upon the three names selected by the Nominating Committee, Drs. Thad Cothorn, E. E. Barlow and Thos. Douglass, for the office of President-Elect.

Upon the first ballot, Dr. Cothorn received a majority of all votes cast, and he was declared elected.

On motion of Dr. Barlow, the election was declared unanimous.

Chairman Seott: The chair will entertain a motion for the Secretary to cast the vote for the other officers as reported by the Nominating Committee, as they are each unopposed.

Carried.

Secretary Bathurst: I have a supplementary report from my associate as delegate to

the A. M. A. It is rather lengthy and covers practically the same report that I gave on the morning of the first day, with the exception that there seems to be some doubt in Dr. Wood's mind as to the result of the election. With your permission, I will include it with my report.

Chairman Seott: If there is no objection, we will settle it that way.

Secretary Bathurst: I have the report from the Committee on Cancer Control, the chairman being absent on the first day of the meeting.

REPORT OF COMMITTEE ON CANCER CONTROL

April 30, 1928.

Mr. President and Members of the House of Delegates:

Sirs:

Your Committee on Cancer Control wishes to submit the following:

In 1926, a recommendation was made to the House of Delegates to assign the work of this committee to the one of health and public instruction. Upon the appointment of its present members, officers of the Society expressed the same opinion. In our endeavor to comply with the wishes of the State Society, forty letters of inquiry were sent to physicians well distributed over the State. Six of them offered definite suggestions as to proper dissemination of knowledge concerning cancer. Five members urged an intensive campaign particularly among the doctors and felt that the Committee on Health and Public Instruction should direct this work, saving time and unnecessary labor. To make the handling of this problem effective will not only require time but also money. The State Board of Health could probably include this in their program systematically and efficiently, with little extra overhead expense. Up to the present time the work of cancer control has failed to reach the desired objective although a number of papers on the subject have been broadcast over radio by the Station of the University of Arkansas in Fayetteville.

We will appreciate a definite reply in this matter and the most effective plan of procedure can be pointed out by the House of Delegates.

Respectfully,

A. M. ZELL, Chairman.

Secretary Bathurst: It has been customary to refer this to the Reference Committee, but they haven't time to consider it.

Chairman Seott: The question is whether this committee shall be put in the section on Public Health or the State Board of Health.

Dr. Cothorn: As the great question is to get the information before the people, and it is a matter of publicity and education and teaching, perhaps it would be better to include it in that committee as we have a special Committee on Publicity for other matters.

Secretary Bathurst: The Committee on Cancer Control is appointed at will by the president. The motion is now to discontinue the committee and have work of this character handled by the standing Committee on Health and Public Instruction.

Carried.

REPORT OF COUNCIL

Dr. Thos. Douglass, Chairman

The Council met at the Randolph Hotel, Tuesday, May 1st, at noon. There were present, Dr. Gann, Chairman; Councilors Verser, John, Lowe, Purifoy, Middleton and Douglass, Councilors Watkins and Jones being represented by Drs. Vinsonhaler and Allbright respectively; also Drs. Scott, 1st Vice-President, Drs. Bathurst, Mann and Lemons.

Reports from the various Councilors were made to the Council. Dr. Verser reported the First District getting along very well; Dr. Allbright, on behalf of the Second District, reported to the same effect; Dr. John for the Third District, likewise. Dr. Lowe for the 4th District reported a general indifference among the doctors in the various counties. Dr. Purifoy reported three counties, Ouachita, Union and Columbia, functioning well in the Fifth District. Dr. Middleton reported that the Sixth District had not done very much work. Dr. Gann reported the Seventh District in good condition, 100 per cent efficiency. Dr. Vinsonhaler was not able to report for Dr. Watkins as to the Eighth District. Dr. Douglass submitted a written report for the Tenth District as follows:

Gentlemen:

I beg to submit the following report:

The county societies of Sebastian, Washington, Benton and Crawford are well organized, in excellent condition and doing good work. They have regular meetings well attended. They have had some exceptionally good meetings, with many visitors from adjoining counties, whom they treated most hospitably. Sebastian County has one of the best county societies in the State. A spirit of harmony and co-operation prevails.

Franklin County has not done so well. We have found it impossible to get the members in the southern part to attend.

Logan County has not had a meeting in three years. A few pay dues to the State Society.

Dr. Fred Youngblood reports for Madison County, that they have an average for thirty years of three members—himself and two others. Some years they have had five members.

Crawford County has fifteen members; Sebastian, fifty-one; Benton, thirty-four; Franklin, twenty. The 10th District has a regular annual meeting, which is well attended.

Respectfully submitted,

THOS. DOUGLASS, Councilor.

Chairman Gann appointed Drs. Douglass, John and Lowe the committee to audit the books of the secretary and treasurer.

On motion, the secretary was authorized to pay all the necessary expenses incident to this convention, and to pay unto himself as editor the usual honorarium.

There was a general discussion as to providing the Committee on Medical Legislation with funds

for the ensuing year in its efforts to have enacted the basic science law. Discussion was also had as to encouraging the medical school in its efforts to improve itself. The discussion of these subjects was continued over until the meeting of the following day, at noon, to which time the Council adjourned.

The Council was called to order at noon, Wednesday, May 2nd. Present, Councilors Gann, John, Verser, Lowe, Douglass, Middleton, and Watkins, and Dr. Allbright in behalf of Dr. Jones; also Drs. Scott, Bathurst, Lemons, Mann and Vinsonhaler.

Motion adopted to the effect that the Council endorse any movement for the betterment or improvement of the medical school of the University of Arkansas.

Motion adopted to allow the Committee on Medical Legislation the sum of \$1,000.00 for their preliminary work in selling the basic science law to the medical profession and the laity of the State.

Council adjourned until noon of the next day, Thursday, May 3rd.

The Council was called to order at noon, Thursday, May 3rd. Present, Councilors Gann, Verser, Douglass, Middleton, Watkins and Purifoy; also Drs. Bathurst, Mann, Scott and Lemons.

Motion adopted to appropriate the sum of \$300 for subscriptions to HYGEIA, published by the A. M. A., to be sent to such persons as the secretary might select, including county superintendents of public schools, libraries, and newly elected members of the Legislature.

Dr. Watkins, on behalf of the Sixth District, reported the same in good condition, with Cleburne County, however, unorganized.

Motion adopted to empower the Secretary to charge a fee of \$5.00 for furnishing information and executing credentials to members moving from the State, for the purpose of securing reciprocity from the State to which they move.

Secretary Bathurst: There is just one omission to which I would like to call attention, the report of the Auditing Committee was left out in this report. Will you include that?

Dr. Douglass: "The Auditing Committee examined the books of the secretary and treasurer and found them correct."

Dr. Cothorn: I move the Council's report be adopted and, in the motion, I want to suggest that the Council have a meeting not later than the first week in July so as to have the legislative work definitely outlined in time and not be behind as we have been heretofore.

Carried.

REPORT OF REFERENCE COMMITTEE

Dr. M. E. McCaskill

After having carefully read the various messages, reports, resolutions, etc., which were referred to us we wish especially to commend President Thibault's scholarly and timely address wherein he emphasizes the need for a Basic Science Law.

Quoting his statement: "Your duty is to see that the incoming President and the Legislative Committee have the moral backing and the funds to get these petitions circulated, signed and as-

sorted by counties, by the time they are needed."

The need of a State General Hospital is unquestioned, and it is to be hoped the President's suggestions will be carried out.

We recommend that the Committee on Cancer Control be discontinued and its present duties be referred to the Committee on Health and Public Instruction, and that the Committee on Infant Welfare be provided with sufficient funds to function properly.

At this time we disapprove of the Society taking any action concerning the complaint against certain members of the U. S. Veterans' Bureau.

The report of the Delegates to the A. M. A. is most complete and properly presented.

We indorse the Report of the Committee on Medical Legislation, as well as the comments made thereon by the incoming President, Dr. Mann.

Respectfully submitted,

GEO. B. FLETCHER,
M. L. NORWOOD,
M. E. McCASKILL.

On motion of Dr. P. H. Phillips the report was adopted.

Chairman Scott: There is no new business. I want to thank the Society for the co-operation that has been offered to me. I came down here purely from a sense of duty. I want to say to you that it has been a pleasure to receive the courtesies and co-operation that have been extended to me as your presiding officer. I want to thank you for it. (Applause).

On motion, the House of Delegates adjourned sine die, and the meeting reconvened immediately in General Session.

GENERAL SESSION

First Day

The General Session was called to order at 1:30 o'clock, p. m., Tuesday, May 1, 1928, by Dr. Scott, First Vice-President, as Chairman.

Invocation by Dr. J. D. Hammons, Pastor, First Methodist Church.

Our Father, we come to Thee this afternoon with gratitude in our hearts for all the blessings which have been ours; grateful to Thee for the healing ministry that has come to us out of the Gospel of Christ, our Lord, through these men who are the servants of the Most High in the wonderful ministry of their lives.

We pray, our Father, that Thy blessings may be upon them as they gather here in their annual convention. May their association together, their exchange of ideas, prepare them better for service. For the great spirit of service that characterizes these men, we thank Thee, so wonderfully emulating in their ministry, the ministry of Christ, our Lord, as they come with healing in their hands ministering to those who are in need. And we pray, our Heavenly Father, that there may be the power of ministry not only in their hands but in their hearts. May they carry not only the healing balm for the wounds, but may they carry in their hearts that which will also heal the soul, and, in the healing of the soul and the bringing of peace to the mind, hasten the healing of the body.

God bless each one of them and we pray Thee to bless the patients they have left behind. Watch Thou over them while they are absent and minister Thou to them in their absence. And bless this afternoon all for whom we would pray. Forgive us daily our sins, keep us hourly in Thy presence; may we walk continuously along that highway of life that leads to the table-land, to the life of liberty, to the life of freedom, to the glorious life beyond the tomb.

For we ask it all in Jesus' name. Amen.

ADDRESS OF WELCOME

for El Dorado

Hon. J. R. Wilson, Mayor

Mr. Wilson. Mr. President and members of the Arkansas Medical Society: I personally, and the citizenship that I represent consider it a rare privilege and quite an honor to have you as our guests on this wonderful occasion. Possibly the people of this city can appreciate your profession and its vital importance to the American people more so than the people of other communities. We have in the past eight years had in our midst a condition that is possibly unparalleled in the history of the United States. Almost over night we had a condition that developed here that vitally affected the health conditions of our county and city and, with the assistance and co-operation of our Union County Medical Society, we are proud to have you here to see for yourself the things that we have accomplished in the past eight years. We are proud of our city, proud of our citizenship, proud of our churches, of our wonderful school system. We are not boasting or putting over "blue-sky" advertisements about Union County and El Dorado, but we invite our visitors here to see for themselves by personal observation what we have here and what we have accomplished. And, as the mayor of this city and as the spokesman for the 30,000 people who live here, I want to assure you that we are delighted to have you as our guests, delighted to have you see us and know us as we actually live. It is a pleasure for us to entertain you as our guests. And there is never a time, either day or night, that the city administration is not at the service of our visitors. I welcome you on behalf of the entire citizenship of our city, assuring you that we are delighted to have you and wish you Godspeed in your deliberations. (Applause).

ADDRESS OF WELCOME FOR THE UNION COUNTY MEDICAL SOCIETY

Dr. H. H. Niehuss

Dr. Niehuss: It gives me pleasure to welcome you in behalf of the Union County Medical Society and for the medical profession. Mr. Wilson has given you a hearty welcome from the city. He has told you some of the virtues of our location. It is for me to tell you that the Union County Medical Society and the medical profession of the surrounding counties in this section of the State welcome you to the southern borders. We are almost beyond the borders of the State. But I might remind you that there is no place in the State where the sun shines brighter or the moonshine is more refreshing. (Laughter).

It is not the 30,000 people, the oil wells or the beautiful churches, the courthouse or the city hall that prompts you folks to come to meet with us. As we see it, we believe that you are by your visit recognizing the merits of the medical pro-

fession in this section of the State. We feel that we are keeping fairly in progress with the development of this section and that we are developing a medical center here. Our hospitalization in this town is in its infancy and I might say the same of towns in the adjoining counties. We welcome you to inspect our hospitals and you will find three up-to-date hospitals; one which is undergoing remodeling and doesn't show up very well at this time, but the Sisters of Mercy have taken over the larger hospital here and, as you all know, where the Sisters of Mercy are located, the hospital end of our profession may be left in their charge and that it will never suffer any unnecessary want for supplies and accommodation.

We are very proud of the parent organization that you represent to me here at this time at the 53rd annual convention. We realize that in the past and present as well as in the future this organization stands out for fixing the standards for medical science and health matters to this State and ranks foremost with all the States of the Union.

We regret very much that a number of our good friends and men of prominence in this organization have passed away since our last meeting here, but we are glad to have all of you with us at this time, and a few of them I must remind you of their prominence in this work. We regret very much that Dr. Thibault, who has given his life to the profession and has done a great deal for organized medicine, is unable to be here on account of illness; but we are very proud to have Dr. Scott, First Vice-President, to preside in his place. We also regret the absence of Dr. Morgan Smith on account of Mrs. Smith's illness. We claim Dr. Smith as our own and look upon him as the father of medicine in the State of Arkansas, a man who has probably accomplished more than any other one man towards the upbuilding of the medical profession in this State. We could not overlook Frank Vinsonhaler, Dean of Medicine at the present time, dean of our medical school, and who very proudly stands out as leader in his profession and bids fair to continue to build our college to a very high standard. And Dr. Garrison, who has been in public health service for a number of years and has done wonderful work, we are glad to have him with us, as one of the outstanding characters in this meeting. We must not overlook our faithful, old-time friend, the Secretary, who has been serving us for several years and who, as the result of his efforts, and his high standing in the medical profession, has been honored by election to the Presidency of the Southern Medical Association. (Applause).

This meeting should be one of the outstanding meetings in the history of the Arkansas Medical Society. When we extended you an invitation to meet with us, we wanted to show you all the cordiality and the privileges of our city from the standpoint of entertainment. We hope you will have a wonderfully good time, but we do not expect you to overlook the importance of the actual service of your organization. We expect you to make this one of the most wonderful meetings that you have ever held. The indications are that the scientific program at this session will prove to be one of the strong features of the meeting.

There is a subject of outstanding importance to this organization and to the citizens at large, and that is the basic science law to be passed at the next Legislature, raising and regulating the standard of medical practice in this State. It is up to you as the House of Delegates and the Council of the Arkansas Medical Society to accomplish something along this line. We believe

that you are going to do that. We believe that in years to come you will have frequent occasion to refer back to the meeting at El Dorado, in 1928, as one of the outstanding meetings of the organization.

Dr. Bathurst tells you that he has been making a rather scientific study of this Council, the so-called law-making body of the organization, and he has finally made a diagnosis; he seems to think that it is troubled with disturbed metabolism.

We want you to attend the public meeting this evening and the memorial services tomorrow forenoon. We believe you will appreciate them fully as much as the scientific sessions.

Again, we want to welcome you in behalf of the Union County Medical Society, the Tri-County Medical Society and the entire medical profession of the south end of this State, who are glad for you to come among us. (Applause).

RESPONSE TO THE ADDRESS OF WELCOME ON BEHALF OF THE ARKANSAS MEDICAL SOCIETY

Dr. Geo. B. Fletcher

Dr. Fletcher: Mr. President, members of the Society and Guests: In the first place, I am very sorry to hear of Dr. Thibault's condition. Dr. Niehuss mentioned Dr. Morgan Smith today as an old resident. It recalls to my mind that it was about 1915 when I was last in El Dorado with Dr. Smith, and I haven't been here since until yesterday. Of course, the comparison between the El Dorado of that day and of today is remarkable. I am very, very glad to have been one of the members who could have met in El Dorado and compared the conditions now and at that time, a city of today and a small town of yesterday.

Hot Springs, from whence I hail, always likes to entertain this Society and we would be mighty glad to have you next year.

The Arkansas Medical Society must, through me in a very poor manner, following the two speakers as I have, thank El Dorado for the very cordial welcome we have had and for the kind of entertainment and the many things they have done for us, and I am sure there is much more to come, scientific and otherwise.

In conclusion, I hope that all of the members of the Arkansas Medical Society will be sure to visit the new State Charity Hospital in Hot Springs when it is completed. (Applause).

PRESIDENT'S ADDRESS

The President's Address will be found on the first page of reading matter in this issue.

Dr. J. K. Smith, former President of the Texas Medical Society, and Dr. Ellis Lamb, President-Elect of the Oklahoma Medical Society, were introduced as fraternal delegates.

Dr. Smith: As a fraternal delegate, I only wish to express our thanks and appreciation for the honor of being over here. Dr. Joe Gilbert, President of the Texas Medical Society, wishes to extend felicitations for the good of the Society and your future prosperity. (Applause).

Dr. Lamb: Friends, this is more like coming back home. I am indeed proud to be



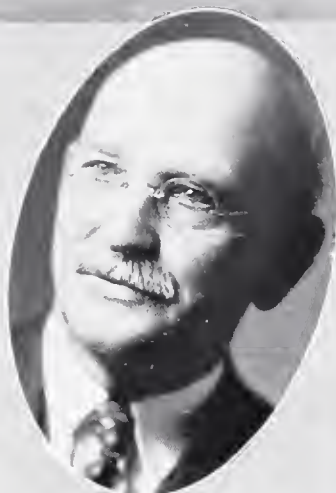
R. H. T. MANN, M. D., F. A. C. S.
Texarkana
President Arkansas Medical Society, 1928-29



THAD COTHERN, M. D.
Jonesboro
President-Elect Arkansas Medical Society, 1928-29



H. H. NIEHUSS,
EL DORADO
1st Vice Pres.



O. M. BOURLAND,
VAN BUREN,
2nd Vice Pres.



WM. R. BATHURST,
LITTLE ROCK
Sec'y. & Editor Journal

SAM J. ALLBRIGHT,
SEARCY
3rd Vice Pres.



R. J. CALCOTE,
LITTLE ROCK
Treasurer



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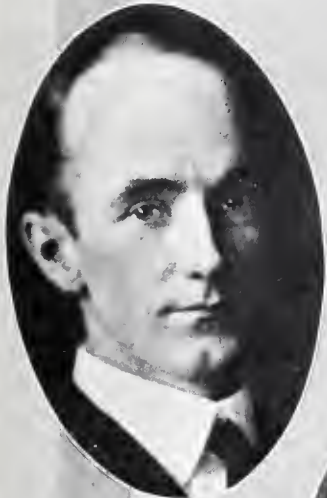
1st Dist.
W.W. VERSER,
HARRISBURG



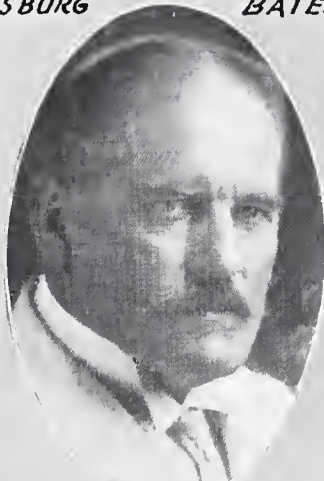
2nd Dist.
L.T. EVANS,
BATESVILLE



4th Dist.
W.T. LOWE,
PINE BLUFF



5th DIST.
L.L. PURIFOY,
ELDORADO



7th Dist.
DEWELL GANN, SR.
BENTON
Chairman



6th Dist.
C.A. ARCHER,
DE QUEEN



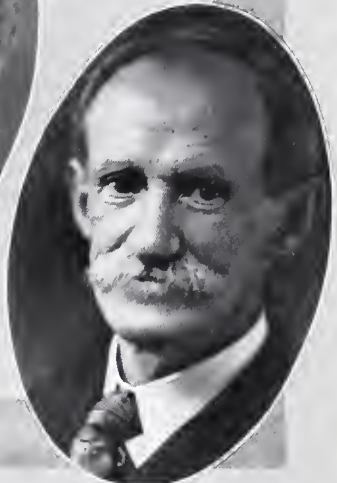
10th Dist. S.J. WOLFERMANN, FT. SMITH.



8th Dist.
ANDERSON WATKINS
LITTLE ROCK



9th Dist.
SAM G. DANIEL,
MARSHALL



MR. F.S. OVERTON, clerk & stenog.

COUNCILORS

here. I was at one time a member of this Society. I am really proud to see what you are doing, proud to see the growth of this Society. It has been my desire for many years to come back and attend one more meeting of the Arkansas Medical Society. I was born and raised in the great State of Arkansas and I love Arkansas and I love the Arkansas Medical Society, next after Oklahoma. It is true my wife hardly expects to see me back home! I sometimes tell stories on Arkansas and she doesn't think Arkansas will stand for them, so I guess I won't tell the stories today. I would like to have as many of you as will and can visit our State Society which meets May 17, 18 and 19. Your Secretary here has finally consented to come. I hope that he will bring a large delegation with him. I am very proud to see what you are doing in this little folder. In fact, I hope to be able to get Oklahoma to take the stand, such as you are doing, on this basic science law. There is a great deal to be said along this line, but I shall not take up your time to discuss them. I thank you. (Applause).

On motion, the General Session adjourned for the day.

During the Scientific Session on Wednesday, May 2d, the following proceedings were had:

Dr. Bathurst: I have a telegram from Dr. W. C. Woodward, Executive Secretary, Bureau of Legal Medicine.

Chicago, Ill., May 2, 1928.

Dr. William R. Bathurst,
El Dorado, Ark.

Senate Committee reported against traveling expense deduction; but recommended increase in Harrison Narcotic Tax to three dollars annually. Senate will consider bill immediately. Protests by telegraph and special delivery should be sent at once to Senators and Representatives by you and all physicians, dentists and veterinarians opposed to committee's findings.

W. C. Woodward.

Dr. Gann, Sr.: I move that our Senators be wired in the name of the Arkansas Medical Society to protest against the action that they have taken, to increase the tax of one dollar to three dollars for securing a Harrison Narcotic license.

Carried.

Chairman Scott: It will not hurt to protest and it will not harm any of us to wire our representative individually protesting against this. I think it will be really more effective than a wire from the Society.

GENERAL SESSION

Last Day

Thursday, May 3, 1928.

The General Session was called to order by Chairman Scott immediately after the adjournment of the House of Delegates.

Chairman Scott: Dr. Cothern needs no introduction from me.

Dr. Cothern: Mr. Chairman and fellow workers: This, of course, is an honor that we are all proud to receive, one that I am deeply thankful for. It gives me a chance to give you more service and perhaps better service. This is your Society and we want to do the best we can for you. Without your help, your officers can do nothing; but with your help, a poor officer can make the Society accomplish a great deal. I thank you. (Applause).

Chairman Scott: Dr. Mann, President of the Society, to whom I will now turn over the gavel. (Applause).

Dr. Mann: Mr. Chairman and Gentlemen: I feel very deeply the honor which you have conferred upon me. But when I look at Arkansas, the medical profession, the nearly two million people who now inhabit this State, with its growing population and its growing wealth, in surveying the situation, the needs of the people, the needs of the medical profession, I feel that I am wholly inadequate to carry out the program which we have outlined. I am going to use all the brains I have and all the brains that I can borrow to see if we cannot change medical conditions in the State of Arkansas, and, instead of being at the lowest round of the ladder, some day you younger men, when the older ones of us are gone, can look at your State with pride and say that you have the best medical service in the United States, administered by the best doctors on this continent. (Applause).

Now, gentlemen, that program is wholly possible. It can be accomplished, it must be accomplished, by the whole-hearted support of the medical profession and by the women of our Auxiliary. You know these women have been talking to me or I have been talking to them and they have endorsed our program

completely and they are ready now to take the stump to carry on. I believe they would have been in their clubs working away at this thing before now had they not had a little intimation that they must keep quiet, so they said; but I told them that I happen to be the boss this year, that I was the president and that I was going to give them permission to talk all they wanted to to get this hospital and get the medical legislation that we need. I don't think that they are going to hurt our cause. They are most enthusiastic over the prospect.

Gentlemen, I beg of you, not for me, but for the two million people in this State whom you represent, and to whom you owe a medical duty, to give every assistance in your power during the next year to carry out this program. I am sure you will do that. There will be many things done which will not be to your liking, there will be many mistakes made, but overlook those. Let everybody get to the wheel and let's see if we can't accomplish the things we have in mind. Now, won't you do that? Won't you forget yourself and any little selfishness which may be in your mind, for the good of the whole profession and for the good of the people of this State? If we work together we are strong; otherwise, we are weak.

Before closing, I want to announce the names of the Legislative Committee, so that they may begin their work at once. It has been necessary at the last minute to change the name of one and that is Dr. Cothorn, but I am going to leave him on the committee at large because he can be of immense help to us during the year. The committee is composed of Dr. Frank Vinsonhale, of Little Rock, as Chairman, Dr. M. L. Norwood, of Loekesburg, Dr. St. Cloud Cooper of Fort Smith, Dr. E. E. Barlow of Dermott and Dr. W. M. Majors, of Paragould, with Dr. Cothorn as a committeeman at large. I want to thank you. (Applause).

The selection of a place of meeting for 1929 was next in order.

Dr. Niehuss: Dr. Drennen of Hot Springs, had to leave early and asked me to extend an invitation for you to meet at Hot Springs next year. We are always glad to have you, especially this time.

Dr. Middleton: On behalf of the Miller County Medical Society, I want to extend an invitation for the Society to meet at Texar-

kana. The Miller County Medical Society voted a year ago to invite the Arkansas Medical Society to meet there and we failed to get them last year and we voted to continue the invitation until we did get them, and so I extend that invitation again. (Applause).

President Mann: Any other nominations?

Dr. Lemons: I move the nominations be closed.

Carried.

President Mann: Did Dr. Drennen have the authority of the county medical society to make that invitation?

Dr. Niehuss: I suppose so. He said he was to extend the invitation, but he couldn't remain.

Secretary Bathurst read the following telegram, just received:

Hot Springs extends hearty invitation State Medical Society meet there next year.

Garland County Medical Society,

Drs. Fletcher and Proctor, Delegates.

On ballot, Hot Springs was selected as the meeting place for next year.

Dr. Lemons: If I am in order, I would like to make a motion. I move you that we express our very hearty appreciation for all the kindness that we have received at the hands of our fellow practitioners of the Union County Medical Society. They have shown us a real good time and it has indeed been a great pleasure to be here. Also we want to extend our appreciation to the hotels for the way they have taken our money. And to the newspapers for the kindness they have shown us, for the publicity they have given our meeting in their city. And last but not least, we want to extend our very hearty thanks and appreciation for the beautiful floral offerings that have been presented to us by Mrs. Dr. Goodman, who has a great feeling in her heart for the medical profession. Her good husband has gone to the Great Beyond.

On motion of Dr. Bathurst the resolution was adopted.

President Mann: Any other resolutions to be introduced? Any other business?

Dr. Cothorn: Before we adjourn, I would like to invite every one to be at Jonesboro, Wednesday, May 16, meeting of the First Councilor District Medical Society. We promise you an interesting program and a general good time.

On motion of Dr. Norwood, the Arkansas Medical Society adjourned, *sine die*.

MEMORIAL SESSION

First Baptist Church

Wednesday, May 2—8:30 A. M.

The Memorial Session was called to order by Dr. F. A. Corn, Chairman of the Committee on Necrology.

Invocation by Dr. W. H. Knight, Pastor, First Baptist Church.

Our Father, we invoke Thy blessing this morning upon this gathering of Thy servants who have come from various parts of our commonwealth to think upon the things that pertain to the advancement of their profession and of the health of our people throughout the State. We thank Thee, our Father, for what the medical profession has meant in the past, what it means today and what under Thy leadership it will mean in the future to human happiness. Now as we come this morning into these services of memory for those comrades who have gone on during the last year, gone on where disease and death are unknown, we pray that the Spirit of God may be present in these services. Be Thou with them in all their deliberations during this convention and especially lead them, we pray, in these services this morning.

We ask that in the name of Him who is the Great Physician of both body and soul, even Jesus Christ, our Lord. Amen.

Violin Solo—Mr. M. Bernstein. "Romanee" (Wieniowsky) Concerts in D. Minor.

Vocal Solo—Mr. Minor Craig. "There is a Land Mine Eye Hath Seen."

Piano Solo—Mrs. C. L. Cliburn. "Hungarian Rhapsodie, No. 2." (Liszt).

Quartette—"One Sweetly Solemn Thought"—Mrs. H. C. Bull, 1st Soprano; Mrs. James Gilbert, 2d Soprano; Mrs. W. H. Knight, 1st Alto; Mrs. S. E. Babb, 2d Alto.

One sweetly solemn thought
Comes to me o'er and o'er;
I am nearer home today
Than I've ever been before.
Nearer my Father's house,
Where the many mansions be;
Nearer the great white throne,
Nearer the crystal sea.
Nearer the bound of life,
Where we lay our burdens down;
Nearer leaving the cross,
Nearer gaining the crown.
But lying darkly between,
Winding adown through the night,
Is the silent unknown stream
That leads at last to the light.
Father, be near when my feet
Are slipping over the brink!
For it may be I am nearer home,
Nearer now than I think.

—Phoebe Cary.

Dr. Corn, Chairman: Gentlemen, since the last meeting in May, 1927, there have been 22 of our members passed on to their last reward. Finding from the time allotted us for this session that we did not have time to eulogize each

one separately, Dr. Warren of Black Rock, has kindly agreed to eulogize the entire list in one address.

LIST OF DECEASED MEMBERS

Leander H. Morphey, Stuttgart, June 16, 1927.

Henry E. Williams, Sr., Pine Bluff, June 23, 1927.

William B. Lawrence, Batesville, July 5, 1927.

Corbin D. Stevens, Magnolia, August 4, 1927.

George W. Granberry, Cabot, August 9, 1927.

John Richard Dale, Texarkana, August 25, 1927.

George Washington Floyd, Western Grove, August 25, 1927.

Robert Lee Harris, Hope, September 8, 1927.

Otey Miller, Fayetteville, September 18, 1927.

James Henry Phipps, Clarendon, September 27, 1927.

Absolom S. Baker, Snowball, October 3, 1927.

John Morgan Phillips, Benton, October 19, 1927.

Carl Finch, McCrory, November 9, 1927.

Lorenzo D. Horn, Egypt, November 18, 1927.

Frederick Emerson Allen, Little Rock, November 23, 1927.

Benjamin McCrary Witt, Little Rock, December 5, 1927.

Charles V. Scott, Little Rock, January 8, 1928.

Hugh H. Henry, Camden, January 21, 1928.

K. W. King, Bradford, January 31, 1928.

William F. Saner, Hope, February 28, 1928.

Thomas Madison Morgan, El Dorado, March 7, 1928.

James W. Walton, Benton, April 18, 1928.

Dr. Warren: Mr. Chairman, Members of the Arkansas Medical Society and Visitors:

It is indeed with a great deal of sadness that we have to conduct this meeting each year to pay fitting tribute to those of our ranks who have passed away during the year intervening. Do you know that many of these are heroes who really have sacrificed their lives for the benefit of humanity, doing the things that they knew were against their better interest, going to see their sick friends, when indeed, in many instances, they themselves were more in need of treatment. And yet, yielding to the importunities of their friends, they did the things they condemned in their patients and told them not to do. It is sad that the family physician is to be, and is rapidly becoming, a thing of the past. A man from the Rockefeller Institute, who delivered an address a few years ago in Kansas City, said that this was a most lamentable state of affairs, that it should be true, but that the pendulum was swinging back and that the world was recognizing the value of the family physician and taking cognizance of the necessity of his service to mankind. I hope that this is true.

Friends, we cannot take up these comrades individually and comment on their various virtues and good qualities, but some of them we must not pass by unmentioned.

Twenty-two physicians have passed away during the past year, and probably more, because for the past several years some of our doctors have passed away just before or during the annual meeting and were not mentioned on the program.

Two years ago it was Dr. Brooksher of Fort Smith who passed away during our meeting. I had an article on Hydrophobia, and he was to open the discussion on it. The day that I read that paper, we received a telegram that Dr. W. R. Brooksher was dead. A sad message, especially to his friends. We hope that we will not receive such a message during this meeting because it does indeed bring a pall of sadness upon our gathering. The majority of these 22 deceased members of the Arkansas Medical Society have died before they reached middle age or just as they reached the zenith of their usefulness, and many of them as they reached the heyday of their manhood.

Now, there is no good reason for it, as I said. They are really martyrs to humanity. There was no greater martyr than Floyd Bennett, whom the nation turned out in rain to

honor because of his death doing his duty to his fellowman. The doctor is just as great a martyr, because he does the things that he knows are contrary to the laws of science, and yet he cannot refuse. As I say, there was no greater martyr than Floyd Bennett, whom the nation and our President stood in the rain to honor because of the great deed, we might say charity, that he attempted to do for the German and Irish flyers, who were ice-bound near Labrador. It is a fitting example, as I see it, and parallel with that of the doctor, as he goes forth in the night, in the rain, in the snow, probably with a temperature above normal, or, equally as bad, with a temperature subnormal, doing his duty to his fellowman.

Friends, the real physician, the real honest-to-God physician, does not expect to lay up treasures in this world because he knows that he cannot. And I will say to you that of the 22 who have departed this life since our last annual meeting, few, very few, had reached the three score years and ten. And of that few, they died in the harness because they felt it was their duty to go on and attend the ills of their fellowmen, serving their distresses, for necessity compelled them to do so, because they had not laid up the necessary money to carry them on that they could retire and take a much needed rest in their declining years. The only one whom I know to have passed 70, was Dr. Horn, who lived in my immediate country, just over the line from my county about half a mile. Dr. Horn was 77, and he was repairing his garage. The door fell on him and broke his limb and he died because of bronchopneumonia or metastatic pneumonia. He died in the harness, died doing his duty, and that just is typical of many of the deaths during the past year.

I want to mention specially Dr. Walton of Benton, who died in April, before he was 65 years old. He was born in 1863, just a few weeks after his father was killed in the Civil War while in the Confederate Army. At two years of age, his mother died, and yet he succeeded in overcoming all obstacles and becoming most prominent in his profession, practicing at Benton, Ark. from the beginning to his death.

Another man whom we knew and loved was Dr. Phillips of Malvern. He was one of the "old guard."

I want to say to you that this is the 33d convention of the Arkansas Medical Society, that I have attended, but only 32 years, with-

out an intermission, and I can count on the fingers of my two hands the men who attended the meeting of the Arkansas Medical Society 32 years ago and who are attending now. I don't feel that I am superannuated at all. If I look it, I surely don't feel it. While I have been a regular attendant of the meetings for 33 years, my ambition is to make it 50. But before that time, I fear, I awfully fear, that my name may be listed among those whom we yearly honor.

Friends, it is a sad, sad commentary and a sad fact that our medical men will not practice what they preach to prolong their lives to the period that they should, their real expectancy in life.

Another one of the men whom we all knew, to whom we must pay attention in passing, is Dr. W. B. Lawrence, known in my younger days as Billie Lawrence. His father before him was a physician. Yet, while he had reached almost three score years and ten, he died, I think, just short of that, he is the only one on the list who was an ex-president of this Society, having served more than 20 years ago, a man who was devoted to organized medicine, to his Society and to his profession.

Another man whom I knew as a student in the University, who was reared at Fayetteville, was Otey Miller. He had little education in his youth; he would not go to school. Later on after he realized the responsibilities of life, he overcame all obstacles by studying assiduously and graduating from one of the leading medical schools in the country, became a prominent physician. He was not 60 when he passed away.

Friends, I do not feel that I am equal to the occasion to say the things that should be most fitting with reference to these many, many deceased members, who passed away during the year, but let us do this: Let us if we can for the benefit of humanity protect ourselves and see that our first duty is the conservation and preservation of our own lives, but it is hard indeed to practice what we preach. And, again it is hard to resist yielding to the importunities of our friends whom we have known for years and have learned to love.

I want to say again that there is not any closer bond of friendship than the real true friendship that exists between the patient and his long-time family doctor.

I hope next year that our list will not be one-tenth of what it has been this year. We thought last year that it was large indeed, but

it seems to me that it is growing year by year, and the reason I have tried to tell you.

Another reason why the physician should endeavor to preserve his health and lengthen his life is the fact that the doctors are becoming scarce. Instead of increasing in number, the statistics show that the doctors are becoming fewer. The demands on them are becoming greater. Through exposing themselves to hardships and disease and through yielding to the importunities of their patients, they are shortening their lives, and there is every reason why they should strive to lengthen their lives because of their usefulness to humanity which needs, and is going to need more and more, their services. I thank you.

Personal and News Items

Dr. Wm. H. Poynor, Harrison, was a recent visitor to Little Rock.

Dr. M. S. Craig has just returned from Rochester, Minn., where he has been attending the Mayo clinics.

Dr. O. J. T. Johnston left the 20th of June for Rochester, Minn., where he will attend the Mayo clinics.

Mrs. Estes, wife of Dr. Estes of Cushman, had her tonsils removed at the Hospital in Batesville, June 21.

Dr. W. P. Parker of Nashville, Tenn., has moved to Hope, Ark., and will be associated with Dr. L. M. Lile.

Dr. J. Baxter Ellis, Helena, announces the association, September 1, of Dr. Charles C. King, formerly of the Surgical Section of The Polyclinic, Memphis, Tenn.

Dr. Paul H. Power of Pine Bluff, announces the removal of his offices from the Physicians' and Surgeons' Clinic to The Children's Clinic, 1015 Cherry Street.

At a meeting of the Greene County Medical Society, held July 12, 1928, Dr. F. M. Scott of Paragould was elected to honorary life membership.

Dr. and Mrs. Herbert Moulton have announced the marriage of their daughter, Elizabeth, to Dr. S. J. Wolfermann at Fort Smith, June 6, 1928. Congratulations and best wishes.

We regret to announce the death of Mrs. Ruby Baugh Fulmer, wife of Dr. S. C. Fulmer, Little Rock. Mrs. Fulmer died June 28, at a local hospital. The body was taken to Conway for burial.

Dr. H. S. Crossen, Gynecologist-in-Chief at Barnes Hospital, St. Louis and Professor of Gynecology at Washington University Medical School, performed two major operations at the Camden Hospital, June 9, 1928.

Dr. Frank Vinsonhaler, Dean of the University of Arkansas Medical School, will address the Ouachita County Medical Society on July 24 on the subject of Medical legislation.

The home of Dr. W. D. Parrish, Rector, was destroyed by fire July 15th. Only a few articles of furniture were saved. Mrs. Parrish was visiting in Jonesboro and Dr. Parrish was alone in the home. Insurance will cover less than half the loss.

Dr. Blanche C. Haines of Washington, D. C., director of the maternity and infancy division, Children's Bureau of the United States Department of Labor, made an official visit to the State Health Department last week to discuss with Dr. Garrison what is being done under the maternity and infancy act, of which she is the administrator.

Councilor District No. 9 Medical Society was organized recently in Harrison. Dr. J. F. John of Eureka Springs was elected president, with Dr. J. H. Fowler of Harrison, secretary-treasurer. Dr. E. G. Fendley, of Leslie, was named first vice-president, and Dr. J. I. Thompson of Yellville, second vice-president.

Eight counties are included in District No. 9. They are Boone, Baxter, Carroll, Marion, Newton, Searcy, Stone and Van Buren.

Eighteen doctors attended the meeting. The society will meet every six months, the next meeting will be held on the first Tuesday in December at Harrison.

Drs. Walter Carruthers and S. F. Hoge of Little Rock were on the program. The visiting doctors were guests of the Boone County Medical Society at a banquet held that evening.

Among the Arkansas physicians at the Minneapolis Session of the American Medical Association were: Wm. R. Bathurst, W. A. Kriesel, Oliver C. Melson, F. Vinsonhaler and Dewell Gann, Jr., Little Rock; H. O. Brown, Waldron; J. F. Crump, Pine Bluff; I. H. Cunning, Knobel; D. W. Goldstein and Arthur F. Hoge, Fort Smith; R. H. T. Mann, Texarkana; C. A. Hardesty, Paragould; H. D. Wood of Fayetteville.

The recent itinerary of the Chairman of the Committee on Medical Legislation embraced the towns of Mena, DeQueen, Nashville, Ashdown, Texarkana, Hope, Prescott and Murfreesboro. Meetings at all these places had been arranged through the efforts of Dr. M. L. Norwood of Lockesburg.

At all these places successful meetings were held, and the results seemed to demonstrate that all of these counties will be for the State Charity Hospital and for the Basic Science Law.

The most successful meeting, perhaps, was held at Prescott. Dr. Vinsonhaler was introduced by ex-Governor McRae. The gathering convened in the courtroom, court having adjourned for the purpose of allowing the doctor the opportunity of addressing those present on the subjects nearest his heart.

The candidates for the Legislature were present at all of these meetings, and, with the exception of Hempstead County, all expressed themselves as favorable to the Basic Science Law and the State Charity Hospital.

FIRST COUNCILOR DISTRICT AND NORTHEAST ARKANSAS MEDICAL SOCIETY

(Reported by W. M. MAJORS, Secretary)

The First Councilor District and Northeast Arkansas Medical Society held its spring session, May 16, at Jonesboro.

At about 10:00 A. M. a large delegation of doctors and their wives met at the First Methodist Church. After they had greeted each other with a general handshake and thanks for the opportunity of the day, the meeting was called to order by the Society's President, Dr. F. M. Scott of Paragould.

Invocation was offered by Rev. J. H. Swann, Pastor Episcopal Church, Jonesboro.

The address of welcome on behalf of Jonesboro was, in a very masterly and forceful manner, delivered by Hon. Eli Collins, Mayor of Jonesboro.

The address of welcome on behalf of the Craighead County Medical Society was delivered by Dr. S. W. Moreland of Jonesboro, who is one of the oldest and most active pioneers in the profession. He extended a most cordial welcome.

The response to the address of welcome was in a very eloquent manner delivered by Dr. A. G. Henderson of Imboden.

Minutes of previous meeting were read and approved. Following this, Dr. Henry G. Hill of Memphis, Tenn., gave a paper on "Fractures of the Shaft of the Femur." Treatment was illustrated with motion pictures. This was a rare treat and elicited a very helpful discussion.

At the conclusion of the above paper, the society was escorted to the basement of the First Methodist Church where was served an abundance of the very choicest of good things to eat. Full justice was done to the feast.

At the afternoon session, Dr. Frank Vinsonhaller, Chairman of the Medical Legislative Committee, discussed the "Basic Science Law," and its provisions, and stressed the

great need of a State Charity Hospital. Before the conclusion of the program, it was voted that the First Councilor District and Northeast Arkansas Medical Society go on record, pledging their ardent support to the passage of the "Basic Science Law," and a bill authorizing the erection of a State Charity Hospital.

One of the outstanding and most enjoyed features of the program was an address by Dr. Wm. R. Bathurst. Dr. Bathurst is very familiar with the needs of the county and State Societies, and said many things to inspire a more enthusiastic support of organized medicine.

Dr. O. C. Melson of Little Rock, read a very timely paper under the title of "The Heart Disease Problem." Appreciation was evidenced by a very lengthy discussion.

The program was concluded with a lecture on "Trench Mouth and Its Complications," with lantern slides and demonstration of treatment by Dr. Henry G. Rudner of Memphis. Dr. Rudner's paper was very much enjoyed. Dr. Shea of Memphis led in the discussion.

W. M. Majors of Paragould was re-elected secretary and treasurer.

The Ladies' Entertainment Committee of which Mrs. Chas. Lutterloh was Chairman, took charge of the visiting ladies and did everything that kind hearts and willing hands could do to make the day one of real enjoyment for them. In the afternoon, the guests were given a very enjoyable theater party.

The meeting was a signal success, and the Craighead County Medical Society entertained the Society royally.

ABSTRACT OF PROCEEDINGS OF HOUSE OF DELEGATES AT MINNEAPOLIS SESSION

The total membership of the House of Delegates is 170. At the final session in Minneapolis 154 delegates answered to the roll call.

All constituent State medical associations were represented except those of Florida, Nevada, Alaska and Hawaii. All sections of the Scientific Assembly were represented by

delegates except the Sections on Pharmacology and Therapeutics; Nervous and Mental Diseases; Dermatology and Syphilology, and Preventive and Industrial Medicine and Public Health.

In the address of the Speaker, Dr. F. C. Warnshuis, it was suggested that the annual speaker's address to the House of Delegates should contain no general recommendations concerning policies of the Association, but that it should deal with the affairs and procedures of the House of Delegates. The speaker urged that careful consideration should be given, and thorough review of matters submitted should be made, by reference committees, and that there should be no generalized approval of referred reports and resolutions.

The President, Dr. Jabez N. Jackson, reviewed vital changes affecting the practice of medicine, referring especially to the development of specialization and institutional care and to the exploitation of the physician in the abuse of medical charity. He offered a recommendation to the effect that there should be an investigation and classification of medical charities, either through a special committee of the Association or through the Judicial Council.

The President-Elect, Dr. William Sydney Thayer, delivered a brief address in which he called attention to the present tendency toward overorganization of the profession. Dr. Thayer paid tribute to the work of Dr. Hideyo Noguchi, lately deceased.

OFFICIAL DELEGATES

The British Medical Association; the Canadian Medical Association; the Victorian Branch of the British Medical Association in Australia, and the Medical Society of Costa Rica were officially represented by Sir G. Lenthal Cheatle of London; Dr. J. Harvey Smith of Winnipeg; Dr. R. G. McPhee of Australia, and Dr. A. Pena Chavarria of Costa Rica, as fraternal delegates, who presented greetings from their respective societies.

ACTION ON REPORT OF COUNCIL ON SCIENTIFIC ASSEMBLY

The Reference Committee on Sections and Section Work commended the report of the Council on Scientific Assembly; recommended approval of the program of diagnostic clinics and clinical lectures which preceded the regular section programs, and approved the recommendation of the Council that all questions of a scientific nature arising in the House of Delegates or in the scientific sections should be referred to the Council on Scientific Assembly for investigation and report before being considered by the House of Delegates.

The recommendations of the Reference Committee were adopted by the House.

MEDICAL EDUCATION AND HOSPITALS

The report of the Council on Medical Education and Hospitals indicated that the Council plans to devote considerable attention for the next several years to a survey of hospitals in the United States. The Chairman of the Council, in presenting the report, indicated that the difficulties of appraisal are recognized and are being considered by the Council. The report also dealt in some detail with the appraisal of clinical laboratories.

The Reference Committee called attention to the fact that the appraisal of medical institutions and agencies in so extensive and so populous a country as this is a vast undertaking and urged that the policy of the Council should be carried out with great caution and in co-operation with constituent State medical associations and State authorities.

The Reference Committee strongly endorsed the recommendation of the Chairman of the Council on Medical Education and Hospitals urging that the practice of medicine is not the proper function of corporations and that the American Medical Association should use its utmost endeavors to stop this growing abuse. The Committee endorsed the substance of a resolution offered by Dr. Southgate Leigh of Virginia to the effect,

(1) That it would be desirable that medical students should graduate and enter practice at an earlier age than at present;

(2) That the plan of covering the medical course in three years of four quarters instead of in four years of three quarters, or any other adequate plan for reducing the length of the medical course, is greatly to be desired;

(3) That the medical course is overcrowded with details and with detailed consideration of specialties and would be improved by less crowding with a course confined more nearly to the essentials, and that efforts to this end should be made.

A resolution presented by Dr. John O. Polak of the Section on Obstetrics, Gynecology and Abdominal Surgery provided that the House of Delegates should disapprove of any reduction in the hours allotted to the teaching of obstetrics and should advocate that obstetrics as a major subject be allotted a number of hours equal to those allotted to surgery. In reporting on this resolution, the Reference Committee on Medical Education made the point that the importance of a subject or the amount of work that it constitutes for the general practitioner alone is not a proper measure of the time which should be allotted to the study of that subject. The Committee also felt that definite instructions of the kind contemplated in the resolution to councils and other bodies engaged in working out difficult problems are inadvisable and that freedom and initiative should not be hampered by rigid instruction. The importance of thorough instruction in obstetrics was recognized by the Committee, but its recommendation was that the resolution of Dr. Polak be not adopted.

The report of the Reference Committee on Medical Education was adopted by the House of Delegates.

HYGIENE AND PUBLIC HEALTH

The Reference Committee on Hygiene and Public Health recommended that the House of Delegates reaffirm its endorsement of the plans outlined at a previous session for medical relief in disaster.

With respect to a communication addressed to the House of Delegates by the National Grange concerning the alleged scarcity of physicians in the rural districts, the Reference Committee offered the following resolution, which was adopted by the House of Delegates:

RESOLVED, That an official reply to the Grange be formulated by the Secretary of the House of Delegates embodying the following thoughts:

1. That the House of Delegates is keenly alive to the problems involved and recognizes that, although there will always be some inadequacy of medical services in sparsely settled communities, improvement of medical services in rural districts is needed.

2. That the problem is being intensively studied by the Commission on Medical Education (already in its fourth year), the Committee on the Cost of Medical Care, the Council on Medical Education and Hospitals, and other bodies.

3. That the problem is fundamentally economic and the solution involves much more than the mere length and costs of medical education.

4. That patience and time are necessary in order to obtain data and evolve methods for solving this problem.

5. That suggestions from the National Grange and information will be welcomed by the House of Delegates and by any of the bodies specially engaged in the study of medical educational and economic problems.

The Committee recommended approval of legislation providing for coordination and increased efficiency of the public health activities of the federal government.

The report of the Reference Committee on Hygiene and Public Health was approved.

LEGISLATION AND PUBLIC RELATIONS

The following resolution, introduced by Dr. C. J. Whalen of Illinois, was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, It has come to our attention that students in universities and colleges are being given free medical care without regard to the ability of the individual to pay for the same, therefore be it

RESOLVED, That the Judicial Council be requested to investigate the matter as to the extent to which this practice prevails.

The Reference Committee recommended that this resolution be referred to the Judicial Council.

A resolution providing that the Board of Trustees of the Association take leadership in the support of suitable legislation to recognize properly the services of Dr. Jesse W. Lazear and Dr. James Carroll was, on recommendation of the Reference Committee, referred to the Board of Trustees.

The recommendation of the Reference Committee with respect to the report of the committee appointed to secure revision of undesirable regulations under the Volstead Act was to the effect that this committee be continued for one year.

The Committee approved the resolution introduced by Dr. Orrin Sage Wightman of New

York providing for the appointment by the Board of Trustees of a Committee on Visual Motion Picture Education.

The recommendations of the Reference Committee on Legislation and Public Relations were adopted by the House of Delegates.

AMENDMENTS TO CONSTITUTION AND BY-LAWS

The Reference Committee on Amendments to the Constitution and By-Laws recommended that the proposed amendment to Section 1, Article 5 of the Constitution, offered by Dr. George Edward Follansbee of Ohio, be made instead an amendment to the By-Laws to be Section 12, Chapter XI, to read as follows:

The House of Delegates shall have the power to expel a member of the American Medical Association or a Fellow of the Scientific Assembly on recommendation of the Judicial Council.

The Committee offered the following substitute for an amendment to Article 12 of the Constitution offered by Dr. J. C. Litzenberg of Minnesota:

The House of Delegates may amend this Constitution at any annual session, provided the proposed amendment shall have been introduced at the preceding annual session, and provided two-thirds of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

The Reference Committee recommended that a change in the By-Laws proposed by Dr. J. C. Litzenberg of Minnesota should be changed so that Section 5, Chapter II of the By-Laws shall read:

SECTION 5.—QUORUM.—Fifty of the voting members of the House of Delegates shall constitute a quorum.

The Committee recommended that a proposed amendment providing that decisions of the Judicial Council should be subject to review by the House of Delegates be rejected.

A proposed amendment to the By-Laws providing for the establishment, maintenance, custodianship and disbursement of special funds by sections of the Scientific Assembly was tabled.

The Reference Committee's recommendation concerning an amendment to the By-Laws, proposed by Dr. Southgate Leigh, to insure representation for constituent associations at the sessions of the House of Delegates was that Dr. Leigh should present the matter in more specific form at the next annual session of the House of Delegates.

The recommendations of the Reference Committee on Amendments to the Constitution and By-Laws were adopted by the House of Delegates, except the recommendation concerning the proposed amendment providing for the establishment and disbursement of special funds by sections of the Scientific Assembly which was laid on the table.

REPORT OF OFFICERS

The Reference Committee on Reports of Officers endorsed the opinion expressed by the Speaker of the House that the Speaker's address should be confined to recommendations concerning the conduct and administration of the business of the House of Delegates.

The Committee did not approve the suggestion offered by the Speaker that the details of the work of the House of Delegates should be published in full, but did approve the suggestion of the Speaker that endorsement of recommendations and reports should be made by the reference committees only after thorough review and consideration of all matters referred.

The Reference Committee offered its approval of the declaration of the President that "the time has come when no institution or clinic should permit its attending physicians to be imposed on; and when, whatever the social or other advantage to the physician in the clinic, he should not be permitted to contribute to what is a gross injustice to the profession as a whole."

The Committee also approved the principle of the President's recommendation for the investigation and classification of medical charities through the Judicial Council.

The Reference Committee especially approved of the suggestions of the President-Elect that in the multiplicity of independent medical societies there exists a danger of diverting and dissipating the fundamental strength of organized medicine "as typified in the composition of our county, State and National organizations."

The recommendations of the Reference Committee on Reports of Officers were adopted by the House of Delegates.

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

The Reference Committee on the Reports of the Board of Trustees and Secretary endorsed that part of the Secretary's report relative

to the multiplicity of existing independent medical organizations whose work, in many instances, parallels the work of the component county and constituent State medical associations and, to some extent, tends to interfere with the successful operation of component county medical societies and constituent State medical associations of the American Medical Association.

Concerning the meetings of hospital staffs, the Committee offered the following statement:

The Committee deprecates especially the compulsory multiple scientific meetings of hospital staff organizations. These have tended to limit to small groups the dissemination of medical information and the discussion of medical problems, interfering thereby with the work of organized medical societies. Organization is necessary in order to obtain unified action of the medical profession in various communities. We feel that the need is greater than ever for general discussion of medical problems and for the dissemination of information associated with the specialties to all physicians. Only in this way can the general practitioner keep abreast of modern medicine.

Your reference committee suggests that the staff meetings of hospitals be devoted preferably to executive discussions of problems relating to hospital economics and records, and that members of the American Medical Association make special efforts to stimulate interest in, and the development of, scientific medicine in the regularly organized county medical societies.

This part of the Committee's report evoked extensive discussion but was adopted by the House as presented by the Committee.

The recommendations offered by the Secretary concerning relief for needy physicians, which recommendations were submitted in compliance with specific instructions received from the House of Delegates, were approved by the Reference Committee with the recommendation that each constituent State medical association should be left to follow its own plan for the relief of needy physicians. After considerable discussion, this matter was referred back to the Reference Committee.

Later on in the session, the Committee reported on a resolution presented by Dr. J. Richard Kevin of New York providing that a committee of the House of Delegates cause to have made surveys through county medical societies to gather additional information concerning the need for the establishment and maintenance of a national home for incapacitated or indigent physicians. The recommendation of the Reference Committee was that the Board of Trustees should appoint a com-

mission of five to consider the whole situation, including the various solutions that have been proposed, and to determine the responsibility of the American Medical Association.

The Reference Committee expressed appreciation for the work accomplished by the board of trustees. It commended the Quarterly Cumulative Index Medicus and strongly urged that the members and Fellows of the Association should give adequate support to this publication. The activities of the Co-operative Medical Advertising Bureau were endorsed by the Committee and expression was given to the hope that the few State journals which do not participate in the work of this Bureau will eliminate the advertising of products which do not have the approval of the Council on Pharmacy and Chemistry.

The report of the Reference Committee stressed the importance of the periodic health examination; commended the work of the Council on Pharmacy and Chemistry, and made an urgent appeal for the support of this Council by the profession at large; approved the work of the Council on Physical Therapy, especially in providing for the dissemination of information concerning the methods of physical therapy among the profession, and commented most favorably on the work of the Bureau of Investigation.

Efforts of the Bureau of Legal Medicine and Legislation toward preventing the extension of socialized medical practice by the government through the Veterans' Bureau and similar organizations were endorsed by the Committee, and the intention of this Bureau to continue its work for legislation, giving physicians the right to deduct from income tax returns expenses incurred in attending scientific meetings and in taking graduate courses of instruction, were approved by the Committee. The activities of the Bureau with respect to the status of the physician as an expert witness were also approved.

The report of the Advisory Committee on Trachoma Among the Indians was endorsed by the Reference Committee, and the continuance of this Committee was recommended.

It was urged by the Reference Committee that members of the House of Delegates should take advantage of every opportunity to keep the component societies of the State associations they represent advised about the work of the American Medical Association.

The Reference Committee expressed appreciation of the Committee on the Grading of

Nursing Schools, and recommended that the request for additional appropriations for the use of this committee be referred to the Board of Trustees.

The action of the Board of Trustees advising the rejection of the offer of the Physicians' Home, Inc., to the effect that this home be taken over by the Association was endorsed by the Reference Committee.

The Reference Committee expressed interest in the growth and worth of the Woman's Auxiliary, and endorsed the continuance of the annual conferences on public health. The continued extension of the activities of the Association were favorably commented on in the report of the Reference Committee, and the plans of the Board of Trustees for providing increased facilities were approved.

The recommendations of the Committee were adopted by the House.

REAPPORTIONMENT OF DELEGATES

On recommendation of the Reference Committee on Reapportionment of Delegates, 775 was established as the basic figure for determining representation of State associations. Thus, each constituent State medical association will have one delegate for each 775 members. Each association with a membership of less than 775 will be represented by one delegate. On this basis, the total membership of the House of Delegates will be 173. California, Florida, New Jersey, New York and Pennsylvania will each gain one delegate, under the new apportionment, while Iowa and Texas will each lose one delegate.

COMMITTEE ON VISUAL MOTION PICTURE

A resolution introduced by Dr. Orrin Sage Wightman of New York, provided for the appointment of a committee on visual motion picture education whose duties shall be to deal with the problem of using motion pictures for educational purposes. This resolution was adopted.

ELECTION OF OFFICERS

The following officers were elected:

President-Elect, M. L. Harris, Chicago; Vice-President, W. A. Jones, Minneapolis; Secretary, Olin West, Chicago; Treasurer, Austin A. Hayden, Chicago; Speaker of the House of Delegates, F. C. Warnshuis, Grand Rapids, Mich.; Vice-Speaker, Allen H. Bunce, Atlanta, Ga.; members of the Board of Trus-

tees, J. H. Walsh, Chicago, and A. R. Mitchell, Lincoln, Neb.; members of the Judicial Council, F. W. Cregor, Indianapolis, and James B. Herrick, Chicago; member of the Council on Scientific Assembly, Roger S. Morris, Cincinnati; member of the Council on Medical Education and Hospitals, Reginald Fitz, Boston, Mass.

Portland, Ore., was chosen as the place of meeting for the annual session in 1929.

The total registration at the Minneapolis Session was 4,876.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The regular meeting of the Benton County Medical Society met June 14, 1928.

Present: Curry, Duckworth, Duncan, Greene, Harrison, Highfill, Ireland, Koobs, Love, McNeil, Moore, Powell, Scott, Smiley, Rice, Wilson. Visitor, T. C. Ramsey.

The following scientific program was presented:

"Case Histories of Untreated Influenza and Their Sequelae," by Dr. C. L. McNeil. He presented six cases in brief, but a very clear outline. The final diagnosis was varied, but most of them were tubercular. Dr. McNeil, in closing, stressed the need for careful post-influenzal observation of all cases.

Dr. J. L. Smiley put aside his prepared paper and presented three case histories of "Gall Bladder Infections," recently observed, all of which were of unusual interest.

Dr. F. M. Duckworth read a paper on "Glaucoma." During the discussion which followed, it was the general opinion that this disease is more common than its diagnosis would indicate.

Several other interesting and unusual cases were reported by members.

WHITE COUNTY

(Reported by F. P. HARDY, Sec.)

The White County Medical Society met in Searcy, June 7, 1928. President L. E. Moore in the chair.

Present: Peeler, Runyan, Brewer, D. W. Sloan, J. R. Sloan, Allbright, Havner and Hassell.

Minutes of the previous meeting were read and approved.

Dr. S. J. Allbright, delegate to the State Society, made his report.

The scientific program consisted of a paper on "Obstetrics", by Dr. D. W. Sloan of Beebe.

Dr. Orlie Parker addressed the Society, stating the aims of the newly created White County Health Unit of which he is in charge.

The Society adjourned to meet in Searcy the first Thursday in August.

INDEPENDENCE COUNTY

(Reported by M. S. CRAIG, Sec.)

The Independence County Medical Society met at Batesville, Monday, June 18, with the following members present: Dorr, Hinkle, Hooper, Evans, Johnston, and Gray of Batesville; Huskey of Moorefield and Robertson of Sulphur Rock.

After a social hour in the Johnson Hotel, the members met in regular session at the County Court House. Drs. Johnston, Hinkle and Rodman were appointed as Legislative Committee.

The following scientific program was rendered:

"Medical Treatment of Hemorrhoids," by Dr. J. M. Hooper.

"Malaria," by Dr. McAdams.

"Cancer of the Liver" by Dr. Jeffery.

"Tetanus," by Dr. Craig.

"Lethargic Encephalitis," by Dr. L. T. Evans.

The meeting adjourned until the next regular meeting time, the second Monday night in August.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular session on June 7 at 8 p. m. at the home of Dr. B. V. Powell in Camden.

Dr. A. S. Buchanan, of Prescott, was the guest and speaker of the evening. He read an interesting paper on "Eclampsia" which aroused considerable discussion.

Physicians present were: Drs. James, Newsum, Buchanan, Early, Jameson, Rinehart, Hathecock, Rushing, Partee, Word, Powell, Purifoy, Davis and Robins.

The meeting closed with delightful refreshments served by Dr. and Mrs. Powell.

The August meeting is to be held at the home of Dr. J. B. Jameson and the September meeting is to be held at Louann and is to be a public meeting.

WANTED—Salaried appointments for Class A physicians in all branches of the medical profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member the Chicago Association of Commerce.—(Adv).

Book Reviews

Clinical Diagnosis by Laboratory Methods.—A Working Manual of Clinical Pathology. By James Campbell Todd, Ph. B., M. D., Professor of Clinical Pathology, University of Colorado, and Arthur H. Sanford, M. D., Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation); Head of Section on Clinical Laboratory, Mayo Clinic. Sixth Edition, Revised and Reset. Octavo of 748 pages with 346 illustrations, 29 in colors. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$6.00 net.

The chief emphasis of the authors of this book is on methods and microscopic morphology. Each chapter has been carefully revised in the light of the numerous advances in clinical pathology.

A Text-Book of Physiology: For Medical Students and Physicians.—By William H. Howell, Ph. D., M. D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Tenth Edition, Thoroughly revised. Octavo of 1081 pages, 308 illustrations. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$6.50.

This tenth edition presents all that is new and useful in physiology. The appendix describes the "Proteins and their Classification" and "Diffusion and Osmosis."

Applied Bio-Chemistry.—By Withrow Morse, Ph. D., Professor of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia, Second Edition, Revised and Reset with the co-operation of Joseph M. Looney, M. D., Assistant Professor of Physiological Chemistry, Jefferson Medical College. 988 pages with 272 illustrations. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$7.00 net.

We quote from the authors preface "The following pages have been written with a view to weaving the woof of biochemistry into the warp of medicine." The following subjects have been given a separate chapter, "Man and His Environment," "The Promoters of Chemical Action: The Enzymes," "The Body and Its Maintenance," "Energy Producers: The Glucids," "Energy Producers: The Lipids," "Structure-Producing Substances: The Protids," "The Special Chemistry of the Tissues," "The Chemistry of Common Foods," "The Digestion of Foods," "The Absorption of Foods," "The Fate of the Absorbed Materials: Intermediate Metabolism," "Nutrition From the Chemical Standpoint," "The Energetics of Nutrition," "Metabolic Adjuncts," "The Excretions of the Body," "Methods for the Determination of Blood Constituents," "Metabolic Studies on Urine and Blood."

A Text-Book of Therapeutics, Including the Essentials of Pharmacology and Materia Medica.—By Arthur A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Seventh Edition, Entirely Reset. Octavo of 758 pages. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$6.50 net.

This book presents a concise description of the most important pharmacologic reactions and shows their practical use in influencing the various disturbances that occur in disease. We find many selections entirely rewritten, and all preparations have been made to conform with those of the Tenth Revision of the U. S. P.

A Text-Book of Medicine.—By 130 American Authors. Edited by Russell L. Cecil, M. D., Assistant Professor of Clinical Medicine, Cornell University, Medical School, New York. Octavo of 1,500 pages, illustrated. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$9.00 net.

In all, there are 130 contributors to this volume, each of whom is an investigator of the subject upon which he has written. The author thought it desirable to prepare the text-book in which each disease or group of diseases would be discussed by a writer particularly interested in that subject.

New and Nonofficial Remedies.—1928, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1928. Cloth. Price, postpaid, \$1.50. Pp. 489 XLIX. Chicago. American Medical Association.

This book is the work of a distinguished organization, the Council on Pharmacy and

Chemistry of the American Medical Association which some twenty years ago was founded to clean out the Augean stables of proprietary medicines. The Council's plan was and has been the publication annually of a book containing descriptions of those unofficial preparations which after careful investigation have been found worthy of recognition and consideration by the medical profession. Such has been the devotion of the Council members, who serve without remuneration, and such the recognition achieved by their work that today the book describes all the new proprietary products which have a scientific base and which give promise of therapeutic usefulness. The physician who best safeguards his own interests as well as those of his patient will give no consideration to any proprietary medicinal agent which is not listed in New and Nonofficial Remedies.

On account of the careful revisions and the current additions, New and Nonofficial Remedies is essentially a new book each year, indispensable to the physician who would keep up with the march of therapeutic progress.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1927.—Cloth. Price, postpaid, \$1.00. Pp. 103. Chicago: American Medical Association, 1928.

The Council on Pharmacy and Chemistry of the American Medical Association annually publishes the reports which tell the reasons for non-acceptance of those products which during the year it has found unworthy of recognition. Some of these reports have been published in abstract in The Journal; all are contained in full in the volume which is the subject of the present review. The physician who has learned to ask the manufacturer's "detail" man, "If it is not in New and Nonofficial Remedies, why is it not?" will find here the answer which that personage will no doubt hesitate to give him. The book shows the practical working out of the principles which the Council's experience has shown to be essential in its fight for rationality in the field of proprietary medicines.

Of much current interest is the reprint of the report of Dr. R. A. Hatcher reviewing the literature on the Gwathmey method of colonic anesthesia and evaluating the present standing and usefulness of this method. This report is an outstanding example of the way in which the Council in addition to its other activities aims to contribute to the advance of general medical knowledge.

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Original Articles

CONSERVATIVE MANAGEMENT OF HYDRONEPHROSIS*

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The recent trend towards conservatism noticeable in so many of the fields of endeavor in which the medical profession interest themselves is truly a healthy sign of the times. Any number of ailments which, a few years ago, were classed as surgical are today being successfully managed by non-operative means. No more forceful an example need be cited than the present day attitude of gynecologists as regards maintaining the integrity of the ovaries and fallopian tubes. With the exception of malignant growths, the attitude of the progressive surgeon is one of circumspection in dealing with genital and generative ailments in women. We might enumerate a host of surgical procedures, touching every one of the surgical specialties, which today are being supplanted by conservative measures in a fashion far superior to the one time mutilating operation. The urologist has more than kept pace with his confreres in this respect. The literature teems with new, non-operative procedures advocated by leaders in the specialty, procedures conservative as regards the maintenance of function of the organ in question, yet efficient enough to bring about the desired relief of symptoms. It is not necessary for me to dwell upon the innumerable advances the urologist has made by a wider adaptation of cystoscopic methods in lesions of the posterior urethra, bladder, ureter and kidney. The space and attention devoted to the cystoscopic department in any modern, well-appor-

tioned hospital attests to the fact that urology has at last come into its own.

There is a type of renal pathology in which we might profitably employ more conservatism than is demonstrated at the present time. I refer to hydronephrosis. Up until quite recently hydronephrosis was always operated upon. Either the sac was drained via the loin, or, what was more frequently done, nephrectomy was performed as the only means by which permanent relief could be given. Not infrequently, no pre-operative urographic study was carried out. Cystoscopy with ureteral catheterization and the aspiration of a large amount of fluid from one or the other kidney made the diagnosis. In rare instances no separate functional readings were recorded. Some time following such an operation—maybe within a month or within a year—the other kidney, unable to sustain the extra load put upon it by the removal of its fellow, would falter, uremia supervene with fatal termination. Such experiences are seldom encountered at present; but occasionally there drifts into the urologist's office a patient who, in the past, sacrificed one kidney to hydronephrosis and now presents an exactly similar condition in the remaining organ. Obviously surgery is out of the question here unless the condition has progressed to such a stage as to demand nephrotomy purely as a means of temporary palliation. Having had many such individuals come under my observation, I have had ample opportunity to investigate and apply the known means of conservative treatment in order to relieve the patient of as much suffering as possible, attempt to overcome the primary factor responsible for the back-pressure and maintain a status of well-being so that he might return to his normal mode of living.

Although it is self-evident that conservatism must be practiced where the patient has but one kidney, there is no reason why non-oper-

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ative measures should not be applied in each and every case of hydronephrosis that presents for treatment. The therapy instituted is harmless, is available in practically every medical group and can be tried with a minimum loss of time as regards the hospitalization of the patient.

Hydronephrosis, as you know, is commonly caused by one of four obstructive factors namely; stricture, stone, tumor, or congenital malformation. Occasionally the uropathy may be caused by a combination of any of the four enumerated. Unquestionable stricture is the principal cause of pyelectasis, stricture of the ureter being much more often the offender than stricture of the urethra. Ureteral calculus quite frequently produces an acute hydronephrosis when it totally blocks the ureter; bladder and urethral calculi must also be remembered. Renal calculi wedged at the uretero-pelvic juncture obviously will cause trouble. Tumors in the ureter, bladder or prostate are ever potential obstructionists.

In my service at the Southern Baptist Hospital it has been of interest to me to observe any number of cases of nephroptosis. Rarely have I found a pyelectasis in these patients. I am aware of the fact that this observation is contrary to the teachings of the past, but it is none the less a fact. Aberrant blood vessels, too, have been blamed for many cases of hydronephrosis. This assumption is not based upon sound reasoning and I understand that a paper is soon forthcoming from the department of urology of the Mayo Clinic, which will refute the claim that anomalous vessels produce these large kidney sacs. Briefly stated, the investigators prove that in most instances the weighty kidney sags over any support it encounters in its downward excursion. This support usually proves to be a blood vessel. Hence, when the urogram of such a case is inspected, a very decided crook or inverted U-shaped ureter outline is registered at the uretero-pelvic juncture. That such conditions are rather common and of no serious pathological significance, my case-urograms furnish ample proof.

DIAGNOSIS

As stated earlier in the communication, it is not sufficient simply to demonstrate an enormous dilatation of the pelvis of the kidney. Every effort should be made to determine the cause underlying the condition. As the obstructive factor is most frequently found

somewhere along the route of the ureter, it is essential that we obtain good ureterograms. Occasionally a spasm occurs the instant the film is exposed which completely empties the ureter. The resultant roentgenogram will register a blank where the ureter is sought. It becomes necessary in such instances to repeat the injection at a subsequent cystoscopy in order to obtain a ureter register. Sodium iodid solutions warmed to body temperature will be found to be tolerated better by the kidney pelvis and ureter and spasms will be observed far less frequently than when this precaution is ignored.

It is my routine practice, upon introducing a ureteral catheter up to the kidney, to aspirate immediately any urinary stasis found in the pelvis. The quantity is noted and we feel it a safe plan to re-introduce about two-thirds of this amount (of sodium iodid solution) in making urograms. After the pelvis has been comfortably filled (and I use the term "comfortably" advisedly), the catheter is slowly withdrawn, the iodid solution being injected all the while. Usually from 3 cc. to 5 cc. of solution is deposited in the ureter. At the instant the catheter is completely withdrawn the roentgenologist is told to make the exposure. Within eight to ten minutes a second exposure is made to test the emptying capacity of the kidney. Normally, the kidney empties itself in ten minutes. Having access to one of the newer cystoscopic-roentgenographic tables (such as the Braasch-Bumpus table) is absolutely necessary in order to attain uniform results.

TREATMENT

Adequate, continuous drainage is of prime importance if results are to be expected in the treatment of hydronephrosis. In the non-surgical handling of these conditions it is surprising how much can be accomplished through cystoscopic interference alone. By means of an 11 F., whistle-tipped Garecan catheter, introduced up to within the hydronephrotic sac, and allowed to remain indwelling over a given period, the renal stasis, no matter of what magnitude, can be completely relieved. It still remains somewhat of a mooted question among a minority of urologists as to just how long it seems safe to allow an indwelling catheter to remain in a ureter for drainage. My practice has always been to leave such catheters in only for from twenty-four to forty-eight hours. Oc-

asionally, where the ureteritis is intense, the first Gareean catheter drainage is terminated at the end of twelve hours. The patient is always permitted two to three days rest between the intervals of indwelling ureteral catheter drainage. Obviously no hard and fixed rules can be laid down that will cover all cases. Everyone agrees, however, that granting the patient tolerates such a catheter with a fair degree of comfort, the first drainage should be of a minimal period, say twelve hours. Within a few days the procedure would be repeated and now the Gareean might be kept fixed in twenty-four to thirty-six hours. At the beginning of these treatments a reactionary edema is sometimes noted occurring in the mucosal lining of the ureter following the withdrawal of the indwelling catheter. If this edema assumes such proportions as to totally occlude the ureter, producing a temporary ureteral block, it becomes necessary to immediately re-introduce an indwelling catheter. Under such circumstances we would not again resort to the 11 F. catheter, but would select a smaller size, namely, a 7 F. or a 9 F.

While an indwelling catheter is being employed for renal drainage it is imperative that its lumen be kept open. Even catheters as large as 11 F. may become blocked with detritus and it devolves upon the urologist to instruct the nurse in charge how, every hour, to flush out the catheter with 5 cc. of a weak ($\frac{1}{4}$ per cent) solution of mercurchrome.

The question naturally arises: Of what permanent value is this mode of therapy? I can answer this best by citing instances from my own experience with the method. I have treated conservatively during the past twelve months 23 cases of hydronephrosis. Many of the patients are from out-of-town. They have averaged a week in the hospital. During that time they usually receive two treatments. The improvement of symptoms is usually immediate. Fever, pain and swelling in the loin subside and, with rare exceptions, remain abated. Returning home these patients gain weight, are able to return to their routine duties and appear to take a new lease upon life. Some return within a month for a single treatment; others go along for two or three months before another drainage appears indicated. In those cases in which calculus in the ureter is recognized, the patient remains with us until the stone is expelled. Ureteral stricture cases are granted longer intervals

between dilatations with the Gareean catheter. In those instances where we are dealing with inaccessible new growths or the more serious congenital malformations the method obviously is not to be recommended.

In conclusion, I would but reiterate my plea to the general surgeon that in dealing with hydronephrosis he avail himself of the services of the urologist on his hospital staff and that every effort be made to relieve the patient by non-operative means. Let us reserve nephrectomy or even nephrotomy for those cases in which it is impossible to attain results by simpler means. Let us remember that in most instances a nephrectomy on one side means that sooner or later—and usually sooner—the patient is going to return with a similar state of affairs in the remaining kidney. It is often better to permit the individual to retain both of his kidneys, even if there exists a bilateral uropathy, rather than sacrifice one with the knowledge that the other is not all that it should be. A normal kidney may, at times, improve in function once its diseased fellow is removed. But this does not always occur as my case-records bear witness. It would appear therefore that conservative management in dealing with hydronephrosis is rational and merits consideration.

DISCUSSION

DR. H. F. H. JONES, Little Rock: I appreciate very much this wonderful presentation Dr. Walther has just given us on this subject. It is most interesting, and the slides were very excellent indeed. I have here a few slides which further emphasizes the necessity for conservative treatment of hydronephrosis.

The conservative treatment of hydronephrosis, as he pointed out, means very much to the patient. We see these cases so often, which have had operative procedures, and, as he has shown you there, lots of times the kidney has been taken out and we have the other kidney that is practically functionless. We have to cure that case with procedure similar to that which he has just demonstrated.

We have a case there (slide) of stricture of the ureter, which I think is primary to a stone. This case has a stricture and stone developed, I think no doubt, due to urinary stasis, and we have there a uretero pyelogram with marked dilatations of the ureter and pelvis. That ureter there is about as large as the intestine. There is the same case showing the pyelogram. The capacity of this kidney was 195 cc.

With ureteral dilatation and the use of indwelling catheters, stone was passed and stricture was relieved and patient obtained great relief. This slide of same case shows the pelvis has been reduced to 35 cc. The function has increased nearly to normal and the patient's kidney was saved.

I use the indwelling catheter a little longer than Dr. Walther. I use it from three to five days in selected cases. Some cases will not tolerate the

catheter, which, of course, means more frequent cystoscopic treatments.

This next case shows very distinctly stricture of the ureter. And this case is of the type that, if we can get early enough and treat it, it means you are saving that patient's kidney.

These are the type we see that have gone on and, when they get up in years, they have a marked hydronephrosis and probably with loss of their kidney. So early diagnosis and early treatment are of value.

I am one of these stricture advocates. You remember my paper two or three years ago in which I dwelt on stricture of the ureter and, like Dr. Walther, I think it plays a very material role in this condition. I don't use as high a percentage of sodium iodide as he does. I use an iodide solution, which is mercuric iodide in 12 per cent solution of Na Iodide.

In edema of the ureter, following ureteral catheterization and the use of the indwelling catheter, sometimes it is necessary to go back and use a small catheter, as Dr. Walther said, to relieve the condition.

I again wish to voice my appreciation to Dr. Walther for his most excellent paper.

DR. G. W. REAGAN, Little Rock: I believe we should extend our thanks to Dr. Walther for making this long trip here and presenting us such an excellent paper. I know that Dr. Walther is a conservative urologist. He is the most conservative man I think I have ever come in contact with. He is a really conservative surgeon. I have been in his office and have been with him at the hospital, and I know that he considers every step most carefully.

One thing, ureteral strictures are being caused from hydronephrosis. The cause for the ureteral stricture might be removed, since we usually find they are due to some infection in other parts of the body, the tonsils and teeth, and, if we can find ureteral stricture causing hydronephrosis these foci of infection should be removed.

I am glad to hear Dr. Walther's reference to falling vessels being the cause of hydronephrosis. There has been a great deal said about this; but Dr. Walther showed in one of his slides a patient that had ptosis and probably a kink over the vessel but had good emptying power and that kidney pelvis emptied. Although this patient did have ptosis, it showed that ptosis was not the cause and the vessel was not the cause of this hydronephrosis.

We can all learn, from Dr. Walther's paper, from the lantern slides and from what he said, that dilatation of the ureters to a large degree is the thing that relieves these patients so much. We not only empty these pelvises and give the kidneys a chance to recuperate, but we also dilate the ureter and have a good outflow of urine after this, and that is one of the advantages of a large catheter.

I hope you all have appreciated the fact that Dr. Walther has brought before us a number of patients that were operated on without previous urological study and treatment. Dr. Walther presented three or four slides there where the man or woman had a kidney removed for hydronephrosis and two or three years later came to him or to some other urologist with the same condition present, that the other kidney had been removed for. Of course, you can't remove the remaining kidney. So we must practice conservatism. Why not be conservative in both kidneys in place of

having to be forced to be conservative with one kidney?

DR. WALTHER, in response: Just a few points that I thought of. One is with regard to a mass or tumor in the side. This is a very misleading finding, especially if you don't find it, (if it is negative). Many individuals suffer from urinary complaints and may suffer from hydronephrosis. But if they are very stout, you are not positive that you can palpate the kidney. With thin individuals, it is different.

Stout individuals can have urinary pathology and have hydronephrosis just as easy as thin ones. The fact that you cannot palpate the tumor with definite symptoms of urinary trouble should be sufficient to have that patient subjected to a urological examination. I see a great many doctors with ailments of this kind and I believe that this is one way of driving this matter home. If any of us in this audience today had a hydronephrosis what would you prefer? Surgery with removal or a drastic operation on the kidney, or attempt this conservative line of treatment first? That's what we must consider. That's what I have always considered. I have never purposely attempted to do anything on the patient that I wouldn't want to have done upon myself.

The matter of focal infection, of course, is one that we must ever bear in mind, and the urologist is supposed never to forget it; not only the lower tract, the prostate gland and the seminal vesicles but the teeth, the tonsils, the sinuses and the appendix are ever before his mind and should be investigated if we are going to clear up a kidney infection. If the perpetuation of that thing depends upon a feeding focus somewhere else, we must attend to that other focus obviously.

Now, as you remember, when the x-ray first became popular in the diagnosis of abdominal conditions, we did only unilateral studies. When the patient had a pain in the left side, he was sent to the x-ray man for an x-ray of the left side. When they had a pain on the right side of the abdomen, they had a plate made of that side. And we unquestionably slipped up on a great many things at that time, because very often there might be some pathology present in one kidney and, through some unexplainable reason, the pathology found on the other side. So that we know we have to ray the whole abdomen.

The same thing applies to pyelography. You cannot attend a national meeting unless you hear the double pyelography condemned as being dangerous. They don't do it at the Mayo Clinic. I wouldn't do any other kind. To me it is the only procedure worth while, comparing one side with the other.

The phthalein test for renal function is being neglected in many quarters. It is purely a dye test. It will not supplant the blood chemistry or any other laboratory or clinical test, but it is the simplest thing we have at our command today to get a rapid and fairly accurate determination of a patient's renal secretory capacity. The newer method of doing the test is to shorten it up one hour. Instead of doing a two-hour collection test at 60 minute intervals, do a one-hour test at 30 minute intervals. If you would watch a series of such cases in your hospital, you would be surprised to find what a large percentage of that dye is excreted in the first half hour. We commonly get in normal individuals 40 or 50 or 60 per cent phthalein in one hour. We know that the normal is between 70 and 90, so that, if you get this high rate in one hour, you need not go any farther. The way we gauge the power of the kidney is to gauge the first half hour output by the next one.

If your patient has a 40 per cent phthalein and he puts out 30 per cent in the first half hour and 10 per cent in the second, you know that that case has a good renal function. It responds to the test if you have the highest rate in the first half hour. On the other hand, if you get a 15 per cent phthalein test or a 10 per cent in the first half hour and 40 per cent in the second, although the total hour be 50 per cent one should go into the case cautiously.

HEART FAILURE*

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When a normal man gets out of bed in the morning, he dresses, eats, drives his car, walks, works and does other things that involve physical effort. Being normal, he does these routine things with ease, entirely unconscious of his physical body. What enables him to be just as comfortable while undergoing the physical exertion as while he is quiet in bed, is that he has reserve power. The reserve takes care of the additional burden imposed upon him by his activities out of bed.

As this man lies in bed, there are likewise certain burdens that must be carried by the circulation, if he is to remain alive and well. Blood must be pumped around the body to carry oxygen and nutriment, and to dispose of CO₂ and waste products. The maintenance of the circulation satisfactorily while a person is at rest calls for power on the part of the heart. This power is spoken of as the rest force. The heart thus has rest force that is essential just to keep the body alive, and reserve force, by means of which any additional effort of the body is carried on. Now this reserve force varies greatly in different individuals, just as the bank account varies. Some have little reserve, some have great reserve. Like a bank account, a reserve force can be built up. We have only to think of the training process of athletes, have only to compare the young man as he goes to college, with the same man after he has trained intensively for a football season, to realize what additions can be made to the reserve force by judicious exercise.

On the other hand, reserve force may be depleted. If it is used too often, or too much, or without sufficient intervals of rest to allow for recuperation, the force may diminish. And like other functions and structures of the body it tends to diminish and atrophy with disuse.

Too much and too little are both harmful. In the healthy man however there is a wide margin between too much and too little, and it is within this area that most of us live and act. How shall we know how much reserve force a heart has? It is not quite as easy as finding out what the bank balance is, but it is easy enough so that every practitioner can estimate it. When the man reaches the limit of his reserve force, certain symptoms appear, and these symptoms are the same whether the man is an athlete exhausted at the end of a race, or a patient with aortic regurgitation. The symptoms are shortness of breath, palpitation or pounding of the heart, a sense of constriction across the chest or around the heart, or even pain, especially in the precordial area. By careful questioning the examining physician can estimate the amount of exertion that the patient may undertake before these symptoms appear, and in this way determine the limits of the field of response. If the symptoms develop easily on doing certain things which six months or a year before were undertaken without difficulty, then the field of exertion is being limited. Tests that are frequently used are the distance patient can walk or the flights of stairs he can climb, or the number of holes of golf he can play, or whether he has to go slowly on doing things that earlier he could do with normal speed. The development of any or all of these symptoms means that temporarily the heart force is exhausted. Cessation of the activity, with a sufficient period of rest allows recuperation of the heart reserve, so that the heart will be as well off after the episode as before. If, however, the activity is persisted in either to the full extent, or to a less extent, over too long a time, or if the period of rest is not sufficient for complete recuperation, then the heart will be still further exhausted and the field of response still further narrowed.

The relation of the heart to exercise is thus seen to be a difficult and complicated one. Under skillfully graduated exercise spoken of as training, the reserve force is augmented. With over-exertion the reserve force is depleted. Exercise may therefore be either a help, or a hurt to a heart; which it will be, and whether or not exercise should be advised is a problem that requires no little clinical judgment and experience. Every physician can gain this experience by carefully observing his patients, and by gradually increasing or decreasing exertion as is indicated.

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The cause of these symptoms of exhaustion of the cardiac reserve is insufficient circulation. When the blood is insufficiently oxygenated in the lungs, a certain amount of CO_2 remains in the arterial blood. This blood is more acid than normal, and when it reaches the respiratory center in the brain, it stimulates that center which is very sensitive to acid changes. The stimulation results in increased respiration which brings more oxygen into the lungs and washes out more carbon dioxide. When the increase in respiration reaches a point, rapid or deep respiratory efforts are made, which the patient becomes conscious of as a shortness of breath and dyspnea.

Similar influences affect the vagus center and the sympathetic system so that the heart acts more rapidly or more forcefully or both in the effort to increase the circulation. This results in palpitation, tachycardia and pounding.

The symptom of pain is generally believed to be a reflex response to too little oxygen being supplied to the heart muscle. We know that if a tourniquet is put about an arm, and the muscles, deprived of oxygen, are yet made to work, pain will result. We recognize this principle in intermittent claudication, where pain develops in a limb on walking, to be relieved by rest. The artery to such a limb is sclerosed or partly blocked. Just so the heart. With exertion, and a limited oxygen supply local ischemia may develop. And the ischemic area will suffer, but not having nerves of pain, the pain is not directly in the heart as it is in the voluntary muscle. The stimulus is referred outward through sensory and motor channels, so that the pain is in the chest wall, or is felt down the arm. Or, the reflex may cause contraction of the intercostal muscle, so that the chest is held firmly and seems to be undergoing pressure as from a vise.

As soon as the demands for the increased circulation cease, the cause for these symptoms disappears and the patient becomes comfortable again.

These symptoms develop in the normal heart just as they do in the diseased heart. The only difference between the hearts is the ease with which the symptoms follow exertion. Two hearts may have exactly the same reserve; one of these handicapped, let us say, by aortic regurgitation. Taking care of the extra blood that must be forced out with each contraction of the left ventricle, uses up steadily and constantly some of the reserve force, and leaves

just that much less to meet the demands of physical activity. On exertion therefore the symptoms of failure will develop more easily than with the normal heart.

Any extra burden that the heart has to bear has the same effect. High blood pressure means a greater resistance to work against. Valve lesions mean either more blood to be moved by single chambers of the heart, or stenosis to be overcome. Definite myocardial changes, as fibrosis, mean a poorer muscle to do the same work with and thus easier exhaustion. Toxemias mean feebler muscles temporarily. Any lesion, of any etiology, that puts a burden on the heart, lessens by just so much the field of response of the myocardium. The symptoms of failure are the symptoms of an exhausted myocardium, and any of these factors leads to the enfeebled muscle.

The various lesions, of course, have to be studied carefully, because their effect as a burden on the heart must be estimated as well as possible. This helps us to understand how much the field of response is limited.

When the reserve power of the heart is thus estimated the most important information with reference to the heart is known.

Sir Thomas Lewis considers this information to be worth 50 per cent of all the information that can be gathered by heart study. And fortunately this information can be readily obtained by any of us in the most lonely country cottage as well as in the great city hospitals.

When the reserve force is chronically near exhaustion new symptoms appear. These symptoms are due to slowed circulation in the various organs. Edema of the feet and ankles, disappearing perhaps during rest, may be found. Or, the edema may be permanent, and mount up the legs. The liver becomes engorged with chronic passive congestion of the stomach and intestines perhaps with indigestion. Ascites develops, or hydrothorax. Chronic passive congestion of the kidney may appear, with albumin, casts and perhaps some blood cells.

When the reserve force is all gone, and the rest force is encroached upon, then the patient shows the signs of heart failure while resting quietly in bed. Dyspnea will be present, perhaps orthopnea. Edema more or less diffuse will be in evidence. The very effort to live is too much for the heart with all its additional burdens.

Not every patient with heart failure shows all the symptoms that have been mentioned. Generally in the earlier stages the patients may be separated into two groups depending upon whether dyspnea and edema are the outstanding symptoms, or pain is. If the pain is outstanding, the heart failure is classified as anginal. If the dyspnea and edema are outstanding the failure is classified as congestive. Since the underlying cause of both types of heart failure is the same, namely, exhaustion of the myocardial reserve, and inability to maintain an efficient circulation, it seems only logical that the same general measures of treatment should be applicable to both. In practice this is true and the most important single measure of relief is rest.

Rest is a variable term, and can mean many things. It may mean anything from standing still for a minute to allow a pain to pass off, to absolute rest in bed, the use of urinals and bed pans, and to being fed by a nurse. Just how much rest is necessary in any individual case depends upon the severity of the condition. There are no hard and fast rules. If any rule could be formulated it would be this: rest should be sufficient to allow rapid restoration of the cardiac reserve. The less energy expended, of course, the more rapid the recovery.

Limitation of physical exertion is not the only type of rest. Many heart patients are nervous and worried over their condition, and for days and nights perhaps find themselves unable to sleep. Loss of sleep brings on exhaustion and loss of morale as rapidly as any single factor and should be combatted. Morphine should be used freely for a few days to quiet the mind and body and to secure sleep. It may be followed later by one of the many mild non-habit-forming sedatives.

These measures may of themselves lower the pulse rate. If the pulse is slowed from 90 to 80 per minute, that means 10 beats per minute, 600 beats per hour, 14,400 beats in the 24 hours. Since each beat takes about 0.7 second, that is the equivalent of 72 minutes, or well over an hour's rest in the full day. In addition to gaining the rest, the heart is saved the actual effort of beating 14,000 times. You can easily see what a tremendous effect quieting influences have on restoring the power of the heart.

Digitalis is often very effective in restoring the heart tone, and in slowing the pulse rate. It has often been taught that digitalis has

no effect except in the irregularity of auricular fibrillation. This is not true. While it yields its most brilliant results in failure secondary to auricular fibrillation, it also has powerful and sometimes spectacular results in heart failure due to other causes, especially high blood pressure.

The contra-indications to digitalis are few and far between. You will do much more satisfactory heart work by treating every patient with heart failure with digitalis, and taking your chances on the rare case who can't take it, than by failing to give it to many who might benefit because you are afraid to use it. The really harmful effects of digitalis are exceptionally rarely seen if its use is stopped when nausea and vomiting develop.

Digitalis is supposed to act in two ways. It increases the tone and power of the muscle and it slows the rate. There are times when the pulse is not slowed, yet the heart condition is definitely relieved. Somehow it seems to restore to the heart the ability to carry on a good circulation.

Digitalis should be given in large doses and continued until the desired effect is obtained. If the patient is edematous and dyspneic, I usually give 4 cc. of the standardized tincture at a dose, or its equivalent in tablets, 0.4 gram. This is given for four doses at six hour intervals. This is a total of 16 cc. in the first 24 hours. Then 1 cc. is given every four hours for four doses a day until marked diuresis sets in or until nausea or vomiting (or occasionally diarrhea) develops. Then the drug is stopped entirely for three to five days, and later a maintenance dose of 1 cc. a day is given.

Do not prescribe tincture of digitalis by drops. If you test it you will find that it takes 40-45 drops on the average to equal 1 cc. instead of the 15 drops you expect. This is because the tincture is an alcoholic solution and not a watery solution which yields 15 drops to the cubic centimeter. 10-15 drops of the tincture which is the average dose given is actually only 3-5 minims. This is one reason that so many practitioners have poor results with digitalis, the dosage is insufficient.

Rest, limitation of exertion and excitement, food in small amounts, and frequently, the proper use of digitalis thus form the basis of treatment of heart failure whether of the congestive or anginal type.

Other complaints must be treated symptomatically. Attacks of pain may be, and should be treated with nitroglycerin or amyl nitrite,

or if no results from these, with morphine in sufficient quantities.

SUMMARY:

All living hearts whether normal or diseased are endowed with power to contract. The power to maintain satisfactory circulation with the body at rest is called the rest force; the power to maintain satisfactory circulation under conditions of physical effort is the reserve force. The reserve force varies with each individual and at different times in the same individual. Its amount can be estimated by the ease with which it is exhausted. The signs of exhaustion are shortness of breath, palpitation, pounding, pain. When the heart is diseased, it carries extra burdens that cause exhaustion to develop with increasing facility. When the exhaustion of the reserve force is chronic, the symptoms of stasis in the various organs develop and there is presented the complete picture of heart failure.

Treatment aims at the restoration of the reserve force. The principal method is rest. This may be secured by limitation of exertion, quieting of nervousness, securing of sleep. Digitalis should be used in doses sufficient to secure results.

DISCUSSION

DR. ST. CLOUD COOPER, Fort Smith: I would like to ask what preparation of digitalis the doctor has most confidence in.

DR. HOMER SCOTT, Little Rock: I had one case very recently which interested me; one of these men who was very busy. I tried to get him to take rest. He wouldn't do it. I tried to explain to him that heart trouble is nothing more or less than a problem in hydraulics. Any effort on the part of the patient increases the amount of force that heart must expend to supply blood to the parts. He kept insisting that his business would not permit him to lay off. I think we should keep them in bed.

DR. R. B. ROBINS, Camden: Recently I had a patient that had cardiac decompensation, and the only place of edema was the right hydrothorax.

Since Dr. Stern's paper was mainly a paper on the physiology, I would like to know why this is a very common occurrence, a right hydrothorax. I notice in the literature, there is often only one side in which there is fluid and that usually is the right side.

DR. STERN, in response: If I may, I will answer the second question first. The question of right side hydrothorax is a rather difficult one. It is said to be due to the pressure of the enlarged auricle on the azygos vein, and we find it more frequently in cases of mitral stenosis perhaps than in other conditions. Fetteroef and Landis, however, believe that the pressure is not upon the azygos vein, but upon the pulmonary veins into which empty not only the pulmonary arteries, but also the bronchial artery. This artery breaks up into a plexus on the visceral pleura; stasis in it causes transudation. It is more common on the

right they say, because of the more frequent dilatation of the left heart.

As for the preparation of digitalis, any preparation that is standard is perfectly satisfactory. The important point is that you must give enough of it to get the effect that you want. If you have a tincture that is old and weak, you have to give more of it. If you use a powerful preparation, a smaller dose will suffice. But in either case use it until you get the digitalis effect either improvement in the condition or signs of toxemia. I formerly used a great deal of fat free tincture. It doesn't seem to make any difference, in my experience whether it is fat free or not. Nausea and vomiting are digitalis effects and don't seem to have much to do with the fat that's in it. Lately I have been using the dried preparations, tablets, because I believe we can measure our dosage much more accurately. And furthermore we get away very easily from the 10 and 15 drop idea. Our patients are used to that; many of them talk about it; they talk about the dosage that other patients have had and, if you give them 45 or 50 drops instead of the usual 15, they think you are going to kill them and, if you give them one tablet, which is the equivalent of 1 cc. ordinarily, they are satisfied and will take it without any trouble. In addition you have a definite weight and there is less chance of a mistake. If you count up the tablets and see what's left in the bottle, you know just how many the patient has taken.

ACUTE SUPPURATIVE PAROTITIS*

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This condition, while not particularly common, is of sufficient frequency and interest to merit an occasional study and review of the literature. This phenomenon may occur as a primary entity, but is most often associated secondarily not only to some surgical procedure, but is frequently met with when a strict medical regime has been carried out.

The material considered in this paper is composed of two apparently primary cases and ten secondary cases. The age incidence of the primary cases were six and twenty-seven years, both being of the male sex. Of the ten secondary cases studied the age incidence varied from seventeen to fifty-two years of age, the preponderance falling in the third decade of life. Of the secondary cases eight were female and two were male; and nine followed surgical disease while one followed, or was a complication of, acute parenchymatous nephritis. Of those secondary cases following surgical disease, five followed acute suppura-

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

tive appendicitis; two were secondary to inflammatory conditions in the pelvis, one was secondary to cholecystitis and appendicitis and one followed post-operative intestinal obstruction. Of the secondary cases, the onset occurred from within twenty-four hours to ten days post-operatively.

The first symptoms noted in most cases were swelling, pain, and tenderness in the parotid region. However, one complained of a sense of fullness and soreness of the throat. Five involved the right side, three were bilateral, and one involved the left side; three ruptured into the external auditory canal before being incised. The temperature varied from that of 99 to 103.6. Those cases going on to frank suppuration ran the highest temperature.

Four were aborted by local use of ice, while five required incision and drainage. Three deaths occurred in secondary parotitis. There were no deaths in the primary cases, both demanding incision and drainage. The white cell count varied when noted from 5,750 to 25,000, the polymorphonuclears ranging from 73 to 88 per cent. I wish to report herewith in some detail an apparently typical primary case and a secondary case:

PRIMARY

Male, age six, black.

Chief Complaint: Pain in the left side of face.

Family History: Was essentially negative.

Past History: No childhood disease; gastro-enteritis at the age of four months; laceration of the scalp at one year.

Present illness: About February 8, 1925, patient began to complain of pain in the stomach; was nauseated, and vomited twice. At this time fever was noted and patient complained of pain in the region of the left parotid and headache. The following day fever went higher. This swelling of the left parotid region gradually increased, extending until the entire side of the face and neck were swollen, and the patient was unable to open the mouth. He had several chills during this time. This patient was not seen by the author until about 10 days after the onset, with the following physical findings:

Temperature, 101; Pulse 110.

General Physical Examination: This was negative except for the head and neck marked swelling was present in the region of the left parotid gland, extending from above the zygoma to below the angle of the jaw; some edema was noted about the left eye; it was quite tender over the region of the gland with a sensation of fluctuation. This tenderness and fluctuation extended to below the angle of the jaw, and the skin over the apex of the swelling appeared shiny, with an increase in local heat. Thick creamy pus could be expressed from Stenson's duct on the left side. The papilla was reddened and raised and inflamed. Some tenderness was also noted over the region of the right parotid gland. However, Stenson's duct appeared normal.

Diagnosis: Bi-lateral Acute Suppurative Parotitis with multiple abscess of the left parotid gland.

Blood: White blood cell count was 24,500, with a polymorphonuclear percentage of 86.

Urine: Negative.

Operation: Blair incision, a curved incision over the left parotid region extending from the zygoma to below the angle of the jaw 2 cm. anterior to the ear. The capsule of the gland was exposed and incised; blunt forceps were passed into the multiple abscesses in the substance of the gland. A large amount of thick yellow pus was obtained and the wound was packed with iodoform gauze. Pure staphylococcus was demonstrated in smear and culture.

Progress: Pus drained profusely for several days from the incision. The right parotid region was packed in ice and the patient was given one intravenous injection of 5.00 cc. of a 1 per cent solution of mercurochrome, and the right Stenson's duct probed daily.

Progress: The swelling and pain disappeared from the right parotid region in four days. The temperature returned to normal in a like length of time. Drainage gradually subsided from the incision and the wound was healed in three weeks.

I wish to report in detail the following case of secondary parotitis:

White female, age 29, entered hospital on November 8, 1926.

Chief Complaint: Pain in the right side of the abdomen. There was a history of two distinct attacks of pain in the right lower abdominal quadrant. These attacks were not accompanied with nausea and vomiting; but the last attack was followed by a rise in temperature. The pain was dull in character.

Past History: Had the usual diseases of childhood; tonsillectomy in 1923; otherwise negative.

General Physical Examination: Was negative with the exception of extreme tenderness in the right lower abdominal quadrant over the ovarian and appendiceal region. There was some tenderness found over the symphysis pubis.

Urine: Negative.

Blood: White count, 7,550 with a polymorphonuclear count of 68 per cent.

Operation: On November 9, 1926, an operation of a double salpingo-oophorectomy-appendectomy and a release of adhesions was performed. On November 12th the left parotid gland became enlarged and painful. In a few days under local treatment, the left parotid gland subsided from the size of an orange to the size of a walnut. At this time the right parotid gland began to swell and became painful. Pus was expressed from Stenson's duct on the right side. On November 21, six days after the swelling of the right parotid region, a passage was formed from the gland to the external auditory canal, and a large quantity of thick, creamy pus drained from the ear. Two days later the gland was opened by two cautery punctures. Drainage then continued very freely. The patient returned to her home. The drainage ceased in several weeks with the exception that one cautery puncture had not healed and was still open on January 5, 1927.

Occurrence: Secondary suppurative parotitis occurs most frequently in adults and most authors observe the most frequent incidence in females in the third decade of life. Blair observed that most occurred between the months of November and April, when respira-

tory infections are more prevalent. He found bi-lateral involvement in 20 per cent of the cases while Dyball placed the figure of bi-lateral occurrence at 33 per cent. Acute parotitis as a secondary complication in surgery follows most frequently abdominal operations. It may be a secondary complication to some debilitating medical diseases or infectious diseases.

Etiology and Pathogenesis: As to the etiology and pathogenesis of secondary parotitis, four theories have been suggested in explanation of its occurrence: (1) Reflex or Sympathetic; (2) Toxic; (3) Pyemic; (4) Oral sepsis or duct infections.

The early French and English surgeons of a century ago were of the opinion that there exists a relationship between the parotid and the peritoneum, and that it was also related to the generative organs, and that abdominal pelvic lesions may be followed by parotitis. It will be noted from Paget's writings that the majority of older cases were overwhelmingly associated with oophorectomy, and this strengthened the belief that there was a sympathetic connection with the parotids. The observation has been correctly made that formerly most abdominal surgery consisted of oophorectomies, and these operations were many times complicated by peritonitis. This, as an etiological factor, was long ago discarded.

Dyball has been the chief exponent of the toxic theory. He suggested as a possible cause certain toxic substances present in the blood which were derived from certain organs modified by injury, disease of microbic origin or deranged digestion, and that in cases where abscess developed a secondary invasion by the organism either directly from the mouth up the ducts or through the blood stream occurred. Toxines as a cause are no longer regarded seriously and, in fact, have been eliminated.

The two most important theories today are the pyemic and the duct infections theory. In a consideration of the etiology and pathogenesis of a disease where there is no specific pathogenic agent, the most important underlying factors are the anatomy and physiology of the parts affected. Silbermann and Kagan explain the etiology of post operative parotitis by the anatomic position of the parotid gland.

They find that the external carotid artery and its branches penetrate the parotid gland which is contained in a fibrous capsule, the

latter empties through several branches into the parenchyma of the gland. These properties distinguish the gland from the other salivary glands and favor embolism after operation. The glandular vessels originate directly from the internal carotid artery before bifurcation of the internal maxillary artery. The transverse facial artery provides the parotid gland and part of its small branches perforate the masseteric muscle. It is important that these properties in the blood supply of the parotid gland and this anatomic connection of these glandular vessels with the masseteric muscle are missing in the sub-maxillary and sub-lingual glands. They believe that these are etiological factors of post-operative parotitis due to embolism from the site of operation. Obstacles in the masseteric muscle caused by muscle contraction prevent the embolus from leaving the glandular blood vessel. If the embolus is infected it causes parotitis. Many deny this theory as to infection of the parotid. They raise the points that secondary parotitis has occurred with no infection and again where infection has been present there has been no evidence of thrombosis or septic emboli, undoubtedly some cases are metastatic in origin.

The Duct Infections Theory: Hannau and Pilliet first suggested the possibility of infectious organisms traveling up the duct of the gland. The first portion of the parotid duct contains a flora similar to that occurring in the buccal cavity. Ralston and Oliver noted the occurrence in the medical treatment of gastric ulcer of an incidence of secondary parotitis in 0.4 of 1 per cent when these patients were allowed something by mouth, while an incidence of secondary parotitis occurred ten times oftener in those cases fed by rectum with oral starvation. Seifert advanced the stomatogenic theory of post-operative parotitis.

He explained this as follows: That after operations the buccal cavity is unusually dry, and that there occurs a change in the buccal flora, the staphylococcus becoming the predominating organism in contrast to the pneumococcus, which occurs as the chief representative in normal nutritive conditions. The germs of the later flora are pushed by the movements of the mouth into the neighborhood of the orifice of the salivary duct and ascend these ducts as there is no flow of saliva to flush them down again. This condition of affairs, which occurs following abdominal operations and certain debilitating medical dis-

eases, would suggest an infection of glands other than the parotid exclusively. Against this we observe that the parotid is a serous gland and the sub-maxillary and sublingual are mucous glands secreting mucin. William Stewart Lowe has demonstrated the inhibitory influence of mucin on bacterial growth. He says, "It is evident therefore, that mucin fulfills a potent part in the defense of these glands against infection." Further, the parotid contains lymph glands and the other salivary glands do not. All of these factors favor the collection of infectious agents and the setting up of inflammatory processes. We might also mention traumatism. Deaver believes that traumatism the result of either direct pressure on the parotid gland or the forcible immobilization of the jaw by the anesthetist is an etiological agent. Fisher has shown that traumatism of the bony or soft structures of the face have little or nothing to do with the production of this condition.

Clinical Course: Acute suppurative parotitis of the secondary type may make its appearance within twenty-four hours to eighteen days following operations. Its onset may be insidious or acute. There is no great array of symptoms; in fact, the condition oftentimes develops without any pronounced change in the patient's general condition, but in most cases there is a rapid rise of temperature, an increase in the pulse rate and severe pain. The pain is usually severe due to the fact that the gland is of the racemose type and the fibrous tissue septae between the lobes are very abundant and quite strong, which prevents swelling. There is yet another reason for the severe pain these patients suffer, and that is the peculiar location of the various parts of the gland. Swelling of the glenoid lobe produces pain in the ear and also in the temporo-maxillary articulation, while the earotid pterygoid lobes cause pain and fullness in the throat. There may be inability to open the month and in cases of great swelling, swallowing may be difficult, particularly if the lower lobes of the gland are affected. Again there may be difficulty in breathing due to the same causes. The gland in severe cases swells rapidly, the swelling oftentimes extending down the neck behind the ear. It may extend up to the eye, creating a marked edema in this region. At first there is no change in the color over the region of the gland, then redness followed by a purple discoloration occurs. The skin becomes shiny, especially so

if the inflammation is near the surface. On inspection of the buccal cavity, the ampulla of Stenson's duct which opens opposite the second molar may be prominent, red and swollen. A purulent material may be expressed from this duct on massage. The course varies greatly from the very mild case with little fever and swelling, subsiding in a few days under conservative treatment, to the severe suppurative form requiring incision and drainage. Suppuration without incision usually results in spontaneous opening through the necrosis of the overlying fascia and skin or frequently into the external auditory canal, the temporal fascia or into the pharynx, with an occasionally resultant gangrene of the entire gland.

Bacteriology: The staphylococcus aureus is generally considered to be the most frequent causative agent. The consensus of opinion varies as to the frequency with which other organisms are found, but most writers usually mention the streptococcus, pneumococcus and the colon bacillus in the order named.

Diagnosis: The diagnosis of post-operative parotitis is usually an easy matter. Sudden rise in temperature, pain in the neck and ear, followed by a red tender swelling of the gland is seldom missed, especially after abdominal or other operations remote from the involved region. However, if the operative field be near by, one must differentiate the condition from lymphadenitis or cellulitis, in which the gland itself may be masked by edema and early rupture of the capsule with an extension downward, making the diagnosis difficult. Of course, the possibility of epidemic parotitis must always be kept in mind. Inspection of the papilla of the duct usually shows swelling, redness and the ability to express pus from the same. Spurling and Stewart in reporting four cases of primary pyogenic parotitis in otherwise healthy individuals called attention to the fact that the duct opening may appear normal. They advised catheterization of the duct with a small glass pipette, and if examination reveals many leucocytes on a smear with practically a pure culture of one of the common organisms, the diagnosis is proven.

Prognosis: The mortality in those cases requiring incision is uniformly considered in the literature to be about 30 per cent, but in many instances these figures are wrong, in view of the fact that the original condition for which operation was performed is a definite factor in the mortality.

Treatment: Cold applications in the form of ice with frequent mouth washes probing of the duct and mastication exercises to promote salivary flow, are used in the early stages and usually suffice for the milder cases. However, in those cases in which the general symptoms are becoming worse and the local inflammation is rapidly extending, incision is indicated even before frank fluctuation is noted, because the parotid is surrounded by a particularly tough capsule and, therefore, gangrene develops with extreme rapidity. Blair believes that when he opened the glands in doubtful cases not later than the second twenty-four hours that the delay is far more serious than the incising of the parotid needlessly. The type of incision indicated is one that exposes the entire gland, which the Blair incision quite adequately does. Following an incision down to the gland capsule and incision into same, great care must be exercised for fear of wounding the facial nerve which is in close proximity. This can be avoided by passing a blunt hemostat into the substance of the gland for the purpose of opening up single or multiple abscesses. If the gland is not explored thoroughly, a secondary operation might have to be resorted to before the subsidence of the condition. The usual post-operative treatment is indicated.

Conclusion: (1) There are two main sources of infection; that is, through the blood or lymph stream, and by way of Stenson's duct. (2) More attention should be paid to the condition of the mouths of our patients before and after operation. Following operations some mild salivary stimulant should be given to keep the ducts clean. (3) The reason the sub-lingual and sub-maxillary glands are practically immune is because they are mucous glands, the mucin inhibiting bacterial growth. (4) The consensus of opinion is that the infection of the parotid is due in most cases to an ascending infection from the buccal cavity. (5) Every post-operative parotitis is a potential lethal factor until it proves itself benign. (6) To await spontaneous evolution of frank suppurative parotitis is jeopardizing life.

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ORGANIZATION OF STERILITY CLINIC

It is the opinion of Samuel R. Meaker, Boston (Journal A. M. A., Aug. 11, 1928), that the regular members of the group, which carries out a routine study in all cases, should be a gynecologist, a urologist, and one or two specialists in the fields of internal medicine and endocrinology. Special consultants outside the regular group may be called on from time to time. The gynecologist requires training in certain details not emphasized in ordinary gynecologic practice. He must learn to distinguish the normal from the abnormal in a patient's sex life. He should be able to recognize the stigmas of pelvic hypoplasia, not labeling every small uterus as infantile or accepting every large one as fully developed. He ought to detect even the least conspicuous vestigia of old inflammatory disease. He must become expert in postcoital examination, in the specialized study of endocervical secretions, and in the performance of tests of tubal patency. The urologist also requires detailed training. He must develop very critical standards for the examination of semen, evaluating accurately its physical and chemical characteristics and the number, motility and morphology of the spermatozoa. He should be prepared to carry out in selected cases special tests such as endoscopy and aspiration of the testis. The internist plays an important part in the group study. It is his duty to detect particularly errors of diet, faults of hygiene, focal infections, and intoxications, as well as extragenital or systemic diseases of any sort. He has, of course, all the laboratory reports at his disposal. The endocrinologist, from the histories and the physical examinations of both patients, obtains such data as bear on the question of past or present endocrinopathy. He also supervises the routine laboratory work and arranges for additional tests when necessary. Finally, he must assemble and interpret all the information coming from these various sources. The author outlines his routine of investigation and the system of keeping detailed records.

Editorial

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PUBLIC HEALTH IN FLOODED AREA
OF MISSISSIPPI VALLEY

Approximately one year has elapsed since
the frightful disaster of the flood in the
Mississippi Valley. The United States Public
Health Service, states that some comfort may
be obtained in the knowledge that better com-
munities are being builded on the ruins of
those destroyed, and as a rule, a better public
health regime has been inaugurated. Follow-
ing the flood of waters there has developed
another flood—a flood of sanitation develop-
ment, which has placed that area many years
ahead of the old program in connection with
the development of full-time county health
service. Since July, 1927, 78 counties have
joined the roll of those that are enjoying ade-
quate public health protection through the
labors of over 300 full-time health workers.
This is a distinet step forward, and a stimulus
to perpetuate these endeavors.

If the work continues as it has to date, the
Mississippi Valley will soon enjoy the univer-
sal public health protection it deserves.

This should serve as a splendid example to
other communities and stimulate them to
strengthen their local health departments and
seure adequate full-time health service.

Abstract

PERPETUATION OF ERROR IN
DERMATOLOGY

Diffieult as it was in the beginning for a man
to become a competent dermatologist, these
diffieulties are now manifestly many times in-
creased by reason of the broader conceot and
by virtue of the fact that, to appreeiate prop-
erly and to be able to continue the advancees,
the dermatologic neophyte must be a man well
schooled in the fundamental seienees, and
with a good medical baekground. Udo J.
Wile, Ann Arbor, Mich. (Journal A. M. A.,
July 28, 1928), has been impressed with two
factors that militate against progress and in-
dependent thought among young praetition-
ers. The first of these factors is a trustful ad-
herence to tradition and a plaeid acceptance
of facts that come to us from those we recog-
nize as authority. The second obstaele to prog-
ress is a less pardonable fault, and consists
in a certain laxness in scanning the literature,

resulting in faulty translation and occasionally in gross misquotation. These factors frequently lead to the needless perpetuation of an erroneous concept regarding the nature of a disease, and stand in the way of the elucidation of its true nature. In a field changing with such kaleidoscopic rapidity as that of the practice of medicine, uncritical adherence to tradition and precedent is a dangerous staff to lean on; particularly that adherence to tradition which leads to the establishment of inflexible dogmatism in treatment, and to rigid criteria of diagnosis. How frequently does the young dermatologist restrained in his judgment by tradition, fail to recognize a disease in a child which his text book says is limited to adults. How frequently is a cutaneous disease, otherwise easily recognizable, made difficult to diagnose by the appearance of like lesions in the mucous membranes, or in places where it is said they do not occur. The literature is full of cases recorded as rare or unclassified, which are merely variants of the general rule, and which the inflexibility of our diagnostic criteria fails to permit us to classify. It is perhaps only natural for the beginner in dermatology to look to the names of those who have contributed to his special field as sources of unlimited wisdom, and as incapable of incorrect thinking. A mistake or a scientific untruth, in no sense dishonest, becomes increasingly dangerous in proportion to the scientific reputation of its perpetrator. During the past year the author has come across three interesting examples of the perpetuation of error which are due solely to the prestige and authority and, indeed, the scientific achievements and contributions toward truth of those who made these errors. The reporting of a single case of angioma of the scrotum by competent authority as angiokeratoma has led to an entire misconception of the latter condition, and to the faulty inclusion of what is almost a normal process with a rare and unique disease. A second interesting example of the perpetuation of error is the acceptance of an existing hypercholesterolemia as the cause of xanthomatous lesions. A third misconception, although not wholly, through blind devotion to precedent and tradition, is in the acceptance of that much mooted entity, the so-called pityriasis rubra. One attribute which characterizes the competent student of cutaneous medicine, and might be placed as foremost in his mental equipment, is a discerning and observant eye. A

proper background, therefore, desirable in the equipment of the dermatologist of today would seem to be a good workable knowledge of physics and chemistry, as they apply to therapeutic measures, a substantial background of internal medicine, and an eye which, if not naturally discerning, can readily be educated to the fine differences on which differential diagnosis in cutaneous medicine depend. Together with this, of course, must be the ability of the dermatologist to correlate his knowledge and his clinical observations. To this Wile adds that the novitiate in dermatology could very profitably have what might be called a degree of healthy skepticism for the explanation of conditions that are not already scientifically proved. Armed with a desire to learn and a disinclination to accept any but proved facts, the beginner in dermatology will find himself best equipped to enter our special field freed from the shackles of precedent and least hampered by traditional error.

Personal and News Items

Dr. and Mrs. E. R. Cotham of Monticello recently visited in Little Rock.

Dr. J. S. Jenkins of Pine Bluff is in Memphis, Tenn., attending the clinics, with special work at the Campbell Clinic.

Dr. William A. Pickens, Bentonville, has gone to Rochester, Minn., for treatment at the Mayo Clinic.

Dr. Frank Vinsonhaler and Dr. F. Walter Carruthers of Little Rock, addressed a meeting of the St. Francis County Medical Society, August 7, at Forrest City.

The Ouachita County Medical Society met at the Country Club August 2, with Dr. J. B. Jameson as host. The druggists of Ouachita County met with the Society. A barbecue was served. Speakers included Dr. J. L. Rushing of Chidester, and D. J. Patrick, druggist. A resolution favoring the basic science law and the State Charity Hospital was passed. Announcement was made of the opening of a laboratory at the Camden Hospital. The next meeting is to be held at Louann, and it will be open to the public.

Dr. M. E. McCaskill of Little Rock is attending the Mayo Clinics.

Dr. and Mrs. L. V. Parmley of Jerome have returned from an extended motor trip through the North and East.

Committees of The Civil Legion will officially attend the Notification Ceremonies of both Presidential Candidates, Herbert Hoover and Governor Smith.

Both nominees are members of the organization.

The Civil Legion is a strictly non-partisan organization, whose membership is made up of citizens who served the National Cause as members of the Draft Boards, Councils of Defense and other authorized CIVIL capacities during the World War and who, for various reasons, were denied the privilege of wearing the uniform.

The surviving War Governors constitute the National Advisory Board and headquarters are at 163 West Washington Street, Chicago, Illinois.

Dr. Claiborne March of Fordyce; Dr. Henry T. Smith of McGehee; Dr. William R. Hunt of Clarksville; Dr. B. L. Ware of Greenwood; Dr. Thomas J. Woods of Evening Shade; Dr. H. D. Wood of Fayetteville, are members of the State Executive Committee for Arkansas.

GOLD MEDAL AWARDED DOCTOR EDWARD FRANCIS FOR WORK ON TULAREMIA, THE NEW AMERICAN DISEASE

A gold medal was presented to Dr. Edward Francis, of the United States Public Health Service, Washington, D. C., by the American Medical Association during the meeting recently held in Minneapolis, Minn. The committee on awards considered the research work on tularemia, a new disease of man, as the most important medical work of the year. Recognizing Dr. Francis as the nation's outstanding authority on this disease which has

perplexed science for several years, the committee, in judging his work on the basis of originality, made the statement that the medal was being awarded to him for his thorough and important scientific contributions to the knowledge of tularemia.

Tularemia is primarily an epizootic of wild rabbits and is caused by *Bacterium tularense*, which affects the liver and spleen, producing decay of the tissue cells in these organs shown by innumerable white spots from the size of a pin-point to that of a pinhead to be studded over this surface and resulting in death. Of the wild rabbits offered for sale in the Washington, D. C. market, Dr. Francis examined the livers of 1,000 and found 10, or one per cent to be infected with virulent *Bacterium tularense*.

Man readily inoculates himself with the disease while dressing rabbits, the infection passing from the rabbit's liver through some wound on his hand, resulting in an ulcer on the hand, enlarged glands at the elbow or in the arm pit, and fever which confines him to bed for two or three weeks.

Cooks, hunters, housewives, and market men are often infected in November, December or January, when, owing to relaxation of the game laws, it is permitted to hunt wild cotton tail rabbits for food.

Persons who skin and cut up jack rabbits for fish bait, coyote bait, fox feed, chicken feed, hog feed, dog feed, or for the market, frequently become infected.

Tularemia is "made in America" and has been staged from start to finish by an all-American cast. The discovery of a new disease is an important milestone in medical history. In the history of human medicine there is only one instance in which American investigators alone have discovered a disease of man, isolating its causative agent, determining its sources of infection and its modes of transmission to man, describing its symptomatology and pathology and otherwise elucidating the many essential problems connected with the complete knowledge of a disease—that instance is the story of tularemia.

The disease was first discovered in a ground squirrel in Tulare County, California, in 1910, by Dr. G. W. McCoy, of the United States Public Health Service. It became engrafted into the jack-rabbit population of the West, and then, as a disease of wild rabbits and of man it advanced steadily across the Continent, invading State after State until now, in 1928, there remains only a solid block of six unin-
vaded States composed of the New England group.

Although a new disease of man, tularemia has now been recognized in 42 States of the United States, in the District of Columbia, and in Japan, but in no other country. Of 614 reported cases, 23 have terminated in death.

Dr. Francis himself fell a victim to tularemia while studying his first case of the disease in Utah. He is now devoting himself to its prevention and cure.

Prevention is the key-note of modern medicine. Keep your bare hands out of a wild rabbit—one per cent of them are infected with tularemia. Rabbit meat, thoroughly cooked, is harmless for food, because a temperature of 133 degrees F. kills the infection. Rubber gloves afford complete protection to those who must dress wild rabbits.

Beware of the wild rabbit which the cat or dog has caught—or which a boy has killed with a club—it is probably a sick rabbit. A warning to the poor sportsman is necessary. He should not shoot the rabbit that is on the point of his gun. Let him take his rabbits on the run at twenty-five feet distant and the chances will be lessened that the rabbits he bags will be sick with tularemia.

The women of the country are coming to the rescue. They are telling their sportsman husbands to bring home the birds, but to let

the rabbits lie as they fall—"Don't bring them home!" The disease is new, but the warning is 5,000 years old. Read Leviticus, chapter eleven, verses four to eight: "The flesh of the hare shall ye not eat, and its carcass shall ye not touch; they are unclean to you."

The Iron Content of Foods—As a carrier of oxygen and as an activator of cell functions, iron has significance out of all proportion to the amount in the body—less than a tenth of an ounce, or the weight of a cent. The function of iron in the body has been responsible for considerable pseudo science and actual quackery. The bill-boards have sounded the call to have one's iron day by day. As regards the possibility of a shortage in the iron intake through food, Sherman states that the typical American dietary does not furnish any such surplus of iron as would justify the practice of leaving the supply of this element entirely to chance. Rather, foods should be selected with some reference to the kinds and amounts of iron compounds which they contain. Arranged in descending order as to their iron content, as determined by recent analyses, the classes of foods come as follows: dried legumes, green leafy vegetables, dried fruits, nuts, cereals, poultry, green legumes, roots and tubers, non-leafy vegetables, fish and fruits. Different samples of the same food material show great variations in their iron content. Cabbage, celery and head lettuce, vegetables containing little chlorophyll, were found to be low in iron. Salt water fish contain more iron than fresh water fish. Fish with dark-colored tissue contain more iron than with light-colored tissue. The dark meat of poultry is likewise higher in iron than the light meat. (Jour. A. M. A., July 28, 1928, p. 250).

WOMAN'S AUXILIARY TO THE Arkansas Medical Society

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Obituary

HARE, JACOB L.—Dr. Jacob L. Hare of Wynne, age 67, died July 29, 1928. Death was due to diabetes mellitus.

Dr. Hare was born near Vanndale, Ark., where he grew to manhood. He graduated from the Louisville Medical School at Louisville, Kentucky, in 1891. He moved to Wynne in 1892, spending the remainder of his life there. In 1894, he was married to Miss Mary C. Graham of Vanndale.

He was President of the First National Bank of Wynne at the time of his death, having been president since its organization. He has been closely associated with the business life of Wynne and its development as a town since it was a small village. He was also President of his County Medical Society at the time of his death.

Surviving are his wife, two daughters, Mrs. Jennie Turner and Miss Louise Hare, a grandson, Jacob Hare Turner, and two sisters.

HIPOLITE, FRED A.—Dr. F. A. Hipolite of DeVall's Bluff, died at a Little Rock hospital, July 19, 1928. Aged 65. Besides being a physician, Dr. Hipolite was a druggist of DeVall's Bluff, owning a drug store there.

He is survived by his widow; three daughters, Mrs. C. E. McDuff of Winnsboro, Louisiana, and Misses Frederica and Caroline Hipolite of DeVall's Bluff; two brothers, Walter W. Hipolite and George Hipolite of St. Louis.

LYNCH, RICHARD CALVIN—Dr. R. C. Lynch, Success, died August 12, 1928. Aged 42. Dr. Lynch was Vice-President of the Clay County Medical Society. He is survived by his widow and several children.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society held its regular July meeting Thursday, the 12th, at Gentry.

Present: Steele, Rice, Powell, Eubanks, Atkinson, McNeil, Thompson, Koobs, Horton, Clemmer, Smiley, Wilson and Highfill.

A letter from Dr. Wolfermann of Fort Smith, Councilor of the 10th District, requesting the naming of a Legislative Committee was read. Dr. R. M. Atkinson of Bentonville, Dr. J. T. Powell of Gravette and Dr. J. L. Smiley of Siloam Springs were appointed.

A letter from Miss Ruth Beall, asking for co-operation in holding the fourth annual pre-school clinics was also read. Appointment of physicians to work at the designated places and dates outlined in the program was made.

Dr. J. T. Powell read a paper on "Pyloric Stenosis." It was of unusual merit, he, having given much time and careful study to the subject.

A case report by Dr. Smiley closed the scientific program.

ST. FRANCIS COUNTY

(Reported by J. O. RUSH, Sec.)

The St. Francis County Medical Society met in the Courthouse in Forrest City, August 7, 1928, with a fairly good attendance from both the city and the outlying districts.

The principal speaker of the meeting was Dr. F. Walter Carruthers, Orthopedist, Little Rock. He gave a most interesting and instructive address on "The Diagnosis and Treatment of Osteomyelitis, Both Acute and Chronic Conditions."

Dr. Frank Vinsonhaler, Little Rock, came in the capacity of the official representative of the Arkansas Medical Society, and Chairman of the Committee on Medical Legislation.

The Society is interested in correcting the conditions that exist in Arkansas, pertaining to a State Charity Hospital and are working for the passage of a Basic Science Law. This law is simply and easily expressed and is a hardship to no system of real healing art; viz., that all applicants in future applying for license to practice medicine of whatever branch of medicine be examined in anatomy, physiology, chemistry, pathology and bacteriology, by a non-medical board.

The meeting was greatly enjoyed and the Society is grateful to Drs. Carruthers and Vinsonhaler for their effort to edify and entertain its members.

MASS PRODUCTION IDEA IN THERAPEUTICS

Primarily the physician is an individualist. Usually he thinks in terms of an individual patient. One of the inevitable results of this attitude of mind has been that the physician does not end to utilize in any statistical fashion his own experiences in medicine. Ordinarily, it has only been when the physician has joined others, as in a hospital, that collective data have been available for analysis. There has gradually crept in a certain tendency for the utilization of collective data in therapeutics. In this age, mass production seems to be the keynote. The types of mass production in therapeutics are many. All these types depend, however, on the general idea of a standard method that can be repeatedly reproduced for a considerable number of patients. Utilization of this method is seen in the class idea, especially in the hospital. The class idea has found a great deal of favor in tuberculosis. The physician finds that he can effect a tremendous economy of time by getting his patients together in a class. In many communities and in many hospitals there are now diabetic classes, nutrition classes, obesity classes, and so on. Unquestionably the class method has tremendous value. It is bound to result in an economy of time, although the economy effected will vary a good deal with the particular type of disease. There is a distinct parallelism between teaching a class in any ordinary educational subject and teaching a class in the therapeutics of a particular disease. In both instances the possible size of the class will depend somewhat on the nature of the subject and the personality and efficiency of the teacher. There will always be drawbacks because certain pupils will need a varying amount of personal instruction. In a therapeutic class there will be a wider variation in the mental capacity of the patients than

there will ordinarily be in the mental capacity of pupils in an educational class. Of course the development of specialism, with the special clinics, and with men devoting their attention partly or exclusively to some one field, has given a tremendous impetus toward standardized methods and the collection of statistical data in therapeutics. This mass delivery of therapeutics by so-called standard methods has a large number of drawbacks. If there is little or no opportunity for individual instruction, then the drawbacks are serious from the point of view of effective therapeutics. Patients are primarily human beings and as human beings they have very definite psychologic reactions. Only too often are the collective data merely accumulated and never used and never studied. If the data are not studied and analyzed, the patient is in no better case than the patient who is treated by the highly individualistic physician without a system. The importance of mass production is not primarily for the convenience of the physician, but for the compilation of collective data which may then be studied and evaluated for the benefit of the patient and of medical science. It must be a matter of great regret that so many wise physicians leave behind no record of their experience. Unquestionably this has greatly retarded therapeutic progress. Roger I. Lee, Boston (*Journal A. M. A.*, Aug. 4, 1928), says: The clinical experiences of sound physicians properly organized ought to suffice to solve many therapeutic problems. The mass production idea in therapeutics runs rather against the traditions of the medical profession. There are aspects of it which when rigidly enforced, probably discourage scientific inquiry and medical progress. The mass production idea in the creation of uniform data is far from new and is of course the foundation stone of scientific investigation. There is dire need for the collection of uniform and comparable data in clinical therapeutics.

JES' A LITTLE SARKASTIC

*A revolt to light by J. W. B. in the
Prospect (Ohio) Monitor*

Ten Ways to Tell A Good Doctor

1. He should be about 10 miles away. Then he is better than the one nearest to you, and if he is 40 miles away he is 4 times as good.

2. He should have an elaborate reception room in an high priced office building.

3. With a secretary to take your name and address and hand you the bill as you go out.

4. He should have a white uniformed nurse to show you in when your turn comes to see him.

5. Salaried assistant who takes the history of your forebears and yourself and makes most of your examination.

6. The office should be crowded. If there is a line outside better still.

7. He should belong to 2 or 3 country clubs and play golf 3 mornings and 2 afternoons a week, because then,

8. You should have difficulty in getting an appointment earlier than a week in advance.

9. If your trouble and its treatment is readily apparent to him there is no good reason why his laboratory assistant should not make a few blood tests and the x-ray department take a few pictures. It makes you feel like you are getting your money's worth. Of course, you are not able to judge for yourself not knowing all about these things, but he knows what they are for.

10. But if it is a cold winter's night and the baby's croup is getting worse every minute, or you forgot to take off your boots and change to dry soxs before starting to do the chores, and now at bedtime the first chill of a hard cold or pneumonia is beginning to shake your frame, the nearest doctor is sometimes good too, GOOD ENOUGH.—Tonics and Sedatives, Journal A. M. A.

Book Reviews

Troubles We Don't Talk About.—By J. F. Montague, M. D., F. A. C. S., of the University and Bellevue Hospital Medical College. Illustrated. Published by J. B. Lippincott Company, Philadelphia. Price, \$2.00.

Among the interesting chapters in this book is the author's description of the important facts about hemorrhoids.

He says, "The method which permits a cure of hemorrhoids without operation is one of

the most beneficial features in the modern treatment of rectal diseases. The treatment I refer to is known as the injection treatment and consists in injecting with a fine needle a substance which causes the hemorrhoids to shrink. This must not be confused with enema or irrigation treatments, which are sometimes known as injections. They are entirely different, however, from the injection treatment I refer to. Properly given, in cases suitable for treatment by this method, most astounding cures may be accomplished. In skillful hands it gives absolutely no pain either at the time of injection or at any later date. It is therefore, a very safe, bloodless method and has the great advantage of allowing the patient to continue at his work. Of course, there are cases in which complications have occurred and in which surgical removal is the only answer to the problem presented."

Lectures on the Biologic Aspects of Colloid and Physiologic Chemistry.—A series of lectures given at the Mayo Foundation and the University of Wisconsin, Minnesota, Iowa, Washington (St. Louis), and the Des Moines Academy of Medicine, Iowa, 1925-26. 12mo of 244 pages, illustrated. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$2.50 net.

These lectures cover many of the important questions in colloid chemistry of interest not only to chemists but also to physicians. They present a number of important aspects of recent investigation in the field of colloid chemistry from the biologic point of view.

Affections of the Stomach.—By Burrill B. Crohn, M. D., Associate Attending Physician, to the Mt. Sinai Hospital, New York City. Octavo of 902 pages with 361 illustrations, some in colors. Published by W. B. Saunders Company, Philadelphia. 1927. Cloth, \$10.00 net.

The author's idea in this volume is to portray the subject of diseases of the stomach and its associated conditions from the viewpoint of the laboratory workers in pathological physiology as well as that of the clinician.

All the new data on this subject are well presented and it should prove to be a valuable text-book to many physicians.

Urography.—By William F. Braasch, M. D., Head of Section of Urology, Mayo Clinic; Professor of Urology, Graduate School of Medicine, University of Minnesota. Second edition, Revised and Enlarged. Octavo of 480 pages, illustrated with 759 Roentgenograms. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$13.00 net.

In order to describe the data obtained by roentgenographic study of the urinary tract rendered opaque, the comprehensive term "urography" is used in this book to represent the various regional terms of pyelography, ureterography, cystography and urethrography. The author has added much new material and made many changes since the first volume which gives today a new treatise on what is probably the urologist's most valuable aid to diagnosis.

Nutrition and Diet in Health and Disease.—By James S. McLester, M. D., Professor of Medicine, Graduate School of Medicine, University of Alabama, Birmingham, Ala. Octavo of 783 pages. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$8.00 net.

One of the outstanding books of the year is by a Southern author, Dr. James S. McLester of Birmingham, Ala., on "Nutrition and Diet." Part 1 describes Nutrition in Health; Part 2, Nutrition in Disease, and Part 3, Tables and Charts of a General Nature.

He says, "Carbohydrates from the most important source of energy, which yield as heat and mechanical work; they are the chief

perhaps the sole, source of muscle energy. Fats on oxidation liberate heat, and thus contribute to the maintenance of body warmth. Proteins serve mainly to repair worn out structures and to provide new tissues for the growing organism, but they may be converting a certain portion of their structure into glucose, accomplish the same purposes as carbohydrates and fats. The three may be substituted for one another to a certain extent. In the case of proteins, however, the substitution limits are particularly well defined, and indicate a point beyond which safe reduction or substitution is impossible; the presence in the diet of a small amount of nitrogenous food, "the wear and tear quota," is essential.

There is another group of food factors which, although required only in minute amounts, are absolutely essential. They are called vitamins. Their influence on the animal organism, their sources in nature and the diseases to which they are related are fairly well understood, but their chemical structure is yet unknown."

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Original Articles

THE FAILURE OF A PHYSICAL EXAMINATION OR AN X-RAY EXAMINATION TO REVEAL THE BEGINNING OF A TUBERCULOUS PROCESS AND THEIR FAILURE TO SHOW THE FULL EXTENT OF THE PATHOLOGY AT ANY TIME.

VERIFIED BY AUTOPSY.*

SAM E. THOMPSON, M. D., Kerrville, Texas

The difficult and obscure diagnosis in any disease is the valuable diagnosis. If the disease has progressed and gone forward to a degree where the diagnosis is patent, it offers, as a rule, little or no value. The more difficult it is and the greater the skill and experience required to make it, the greater is its value to the patient and to the service rendered. And there is no royal road to diagnosis. There is no way to move in on it and homestead it. The ability to make a good diagnosis comes with years of hard work and rich experience. So far it is a long way from perfection and probably always will be. The best we can do is to minimize our errors.

The most vitally important part of tuberculosis work is the comparatively early and approximately correct diagnosis. The words comparatively and approximately are used because I shall endeavor to show you later on that the disease cannot be diagnosed when it first begins and that its extent cannot be accurately and marginally outlined at any time. There is always more pathology and the patient is always sicker than any examination will reveal. I know that some authors and some specialists will disagree with and attack this statement. It may be done here today. But I know also that some people

never attempt to distinguish between a question of opinion and a question of fact. There was a time when the opinion stood unanimous, uncontroverted and unafraid, that the world was flat. She was just as round then as she is today! In a very large per cent of tuberculous patients, there either is or has been a time, when the patient could have gotten well. If the disease reaches a certain stage before detection and control, recovery is practically impossible. He may be patched up, but he will never be well. It is this fact that lends so much importance to the question of comparatively early and approximately correct diagnosis. And this is my reason for presenting to you a time worn, much discussed subject.

There are very few specifics in medicine. Specifics are few for any condition in life, which we might wish to change or remove. But as a specific for cocksureness and egotism in making a diagnosis, I can most cheerfully and confidently offer you the post-mortem table. It acts quickly and surely, but at times, it is more or less humiliating and embarrassing.

Realizing that my statements must be supported by something more convincing and reliable than mere opinions, I shall base them on autopsy findings.

The first proposition I wish to submit is this: A physical examination of the chest will not and cannot reveal the presence of the first tubercle formed in the lungs. And this is the beginning of tuberculosis. Why does this examination fail to show it? Simply because the original tubercle or small mass of tubercles is not large enough and does not cause change enough to interfere with the breath sounds or to change the conduction of the lungs. It is no longer than the head of a stick pin. There is not enough pressure and interference to change the respiratory murmur. The percussion note is not altered. Whispered voice is unchanged. Before there

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

are any appreciable changes and therefore findings, the beginning of the process has passed onward.

The formation of the primary tubercle is the result of certain reactions of fixed tissue cells to the irritating substance thrown off by the tubercle bacilli. These reactions result in a cell proliferation which completely envelopes and surrounds the germs. Thus the first tubercle is formed. If, at this stage, nature or the body cannot prevent the formation of other tubercles, the disease goes forward and later there is tuberculosis en masse.

The second proposition to be submitted is that the x-ray will not show any shadows or anything else at this stage of the disease. Before the x-ray picture can show any abnormal condition in the lung, there must be areas of sufficient density, or areas of changed density, to interfere with the uniform passage of the rays of light. Otherwise, the picture is negative for tuberculosis. Infiltration, proliferation, lymph and blood engorgement and many other conditions will show in a picture of the lungs; but these findings come as the disease progresses.

For the past few years in Kerrville we have been very fortunately situated for the study of tuberculosis. We have two sanatoriums. One has a capacity of eighty-six beds, the other has a capacity of five hundred beds. Studying together we have used every opportunity to follow our cases to autopsy whenever permission could be secured. When these autopsies were made, we had present the x-ray picture or series of pictures, together with the doctors' written interpretation. We had also the written physical findings and their assessments. Between the two we had the cold facts as revealed by the pathological findings in the lungs. In following this method of study and investigation the chances for error are minimized. The facts and deductions offered you today were gained from this method of observation. The cases to be submitted are concrete and the information and facts they supply appear worthy of acceptance.

You will not be bored with a long list of case reports as this is not deemed necessary. You will be offered enough to support the contention of this paper as the author sees it. The histories of the cases will be left out also, as they could have nothing to do with what the doctor thought he found.

Case No. 1. This was a young lady twenty-four years of age. She was referred to our

place with the blanket diagnosis of pulmonary tuberculosis. Our diagnosis was tuberculosis of the middle lobe and upper part of the lower lobe or right lung. Over this area there were persistent rales after cough. The respiratory murmur was granular and a little harsh. There was slight dullness and increased whispered voice. The upper lobe of the right and the entire left lung appeared normal. X-ray: There was mottling and what appeared to be areas of infiltration in the middle lobe and upper part of lower lobe. Upper lobe of right lung clear. Sputum positive.

The patient grew progressively worse from what appeared to be some other cause. We could detect no progression in the tuberculosis then or later. The alarmed mother, being very wealthy, wanted extensive and expensive consultation. Before the case was over, which was about three months, we had consultants all the way from Boston to the next meeting place of the National Democratic Convention. There was no disagreement in the diagnosis of tuberculosis and its extent. There was a lack of agreement as to the intercurrent trouble, which later produced death. For this reason the family insisted on a post-mortem, which was conducted by one of the best pathologists in the South. The last examination of this patient was made two days before death. This is mentioned to show that there could not have been much change in pathology between the time of the last examination and the date of death.

AUTOPSY REPORT: The cause of death was not due to tuberculosis so it will be left out of this report. The middle lobe and upper part of lower lobe of right lung showed disseminated areas of tubercles. In some areas there were caseation and beginning liquefaction. In the upper lobe of the right, near the center was a very small mass of tubercles we had not detected or even suspected. There were seven consultants in this case first and last. None of them found any trouble in the upper lobe. There was also a small discrete infection in the upper left just below the apex near the periphery. This had not been suspected.

AUTOPSY No. 2. Male, white, twenty-eight years of age. Diagnosis: Advanced, destructive, terminating pulmonary tuberculosis. Both x-ray and physical examination indicated complete involvement of upper, middle and upper part of lower lobes of the right lung with a large cavity in upper lobe. Left lung

indicated massive involvement of entire upper lobe with beginning softening, but no cavitation. Autopsy revealed large cavity in upper right lobe and caseation of the other parts of this lobe. Below the large cavity were numerous small cavities not previously discovered. The middle lobe was completely involved with caseation. The upper part of the lower lobe was a tuberculous pneumonia. Below this and extending down to the lower border were disseminated small tubercles that we did not find or suspect.

Case No. 3. The diagnosis based on physical and x-ray examinations was complete consolidation with caseation of upper and middle lobes of right. Left completely involved with three distinct cavities in upper lobe. The autopsy verified this diagnosis except there were four small cavities in the upper lobe of the right and disseminated small tubercles in the lower lobe. In addition to the revealed cavities in the left, we found numerous unsuspected cavities in the lower lobe. In every autopsy held, we found the same revelation. There were present areas containing unsuspected tubercles and in areas of recognized disease there was more pathology than our examinations had lead us to believe.

If the above reports do not support and prove the contention of this paper, then I am lost as to how it can be or should be done. These reports are presented without prejudice and in the spirit of seeking the facts. This information should drive home the idea that absence of proof is not proof of absence. If a patient is suffering from symptoms and we cannot find the cause, we have no right or justification in telling him there is no cause. Untold tragedies are wrapped up in the advice, "go on and forget it." If the patient is feeling bad and knows it; if he is substandard physically and knows it; if he tires easily, is nervous, irritable and indifferent to food, it is ridiculous and dangerous to the patient and to the doctor's reputation, to tell him that he needs a tonic and that he will soon be all right. If you cannot find his trouble, tell him so. But tell him likewise there is something wrong and that for his safety you will keep him under observation. The time is passed, not passing, when capable, dependable doctors are expected to make a diagnosis in ten or fifteen minutes. In some conditions it may take more than ten or fifteen days. Do this and the public will respect you and have faith in you for it.

The first symptoms of tuberculosis are not local or lung symptoms. They are general and constitutional in their manifestation. They are toxic symptoms and the patient, as a rule, knows that something is wrong before the chest findings are patent. Keep this in mind and keep your patient under observation. If he feels bad and fatigues easily, if he is irritable and unstable from a nervous standpoint, if he recovers slowly and imperfectly from fatigue, disease or anything else, suspect tuberculosis. If these symptoms disappear and reappear, suspect it. And if we cannot make a diagnosis, let us call for help. It is an embarrassing and a serious thing to tell a patient he has tuberculosis when he has not. It is not only a serious, but often a fatal thing to tell him he has not the disease when he has it. Do not make the mistake of dismissing these patients or treating them with tonics. If you cannot make the diagnosis, seek consultation. Let us follow these ideas and suggestions, and we will have fewer mistakes to explain and fewer regrets to plague and harass us. And best of all, the patient, who is the answer to the whole program, will be protected and saved. Let me leave this with you as sound doctrine: Symptoms with or without physical findings, need treatment. Physical findings without symptoms need to be watched.

DISCUSSION

DR. A. C. SHIPP, Little Rock: We have heard a great paper by a great internist for which, in behalf of the society, I wish to thank Dr. Thompson. I say a "great internist" because a man that evidences the ability to diagnose and search the human body for disease as this paper evidences would be insulted by the term "tuberculosis specialist."

By way of emphasis and to repeat some of the charges that he has brought out, I want to call attention again to some of the things that he mentions. To tell a patient, because the x-ray findings are negative to tuberculosis, that he hasn't tuberculosis is one of the most dangerous practices that we have indulged in since the time that we told a patient that a negative sputum was indicative of the fact that he didn't have tuberculosis. We feel that the day is now here when we shall have the same feeling towards negative roentgenological findings that we had towards the negative sputum findings. There is one need for the roentgenologist to remember in dealing with tuberculosis as with other conditions when a patient is sent to him for a roentgenological examination, that this examination and its results should be reported as a roentgenological examination and not as a diagnosis. The history, the physical findings, the x-ray findings, and all the data and information that can be gathered together for this patient should be in the hands of the diagnostician, and the diagnoses not made by any single person of the force gathering in-

formation. Harm has been done frequently by the patient being told that he has no evidence of tuberculosis. I will relate a case history in this connection.

A girl, 22 years old, came for examination six weeks ago. She weighed 79 pounds. She was running temperature of 101 to 101.8 each afternoon, and had not been put to bed. This is not the sad thing about this history. This is the reason why I feel such an epitome of tuberculography as we have heard this morning should be in the hands of every doctor practicing medicine. This patient had been seen by six physicians during nine months and had been told by each one of them that she did not have tuberculosis. I will say for the benefit of the x-ray man that there had been no x-ray pictures taken of her chest, and the first one that was taken showed a cavity in the right chest. I just mention this case to show how careful we should be in telling patients that they don't have tuberculosis.

I will summarize this by saying that the internist, the diagnostician, should have the last word with the patient.

DR. DON SMITH, Hope: I would not attempt to discuss this paper on tuberculosis if it were not for the fact that, when I graduated in medicine, I graduated with the idea that every case that I saw that had a hemorrhage from the lungs was a case of tuberculosis. Invariably when I was called to see such a patient, I made a diagnosis of tuberculosis and urged immediate rest cure or, at least, going to some one who was prepared to clarify this diagnosis. Years of experience have taught me that every case of hemorrhage from the lungs is not a case of tuberculosis, and yet I am reminded of that little poem that Dr. Thompson quoted. When I graduated in medicine, every case that had a hemorrhage was a case of tuberculosis. Since then, as I say, I have found that every one is not. I wish that my experience had not taught me otherwise. I wish that I could still make my diagnosis of tuberculosis in every case of hemorrhage.

About four or five weeks ago, I was called to see a man in my home town, a big, stout, healthy traveling man. We have there now and have had for the past three or four weeks an epidemic of influenza. I saw this man when he had developed his case a week before. He had a dry, rasping cough. He had a little temperature. His health previous to that time had been perfect. He was husky; weighed 180 or 190 pounds, and muscular. It was a case with no history of tuberculosis on either side, and yet at the base of the left lung I found some crepitant rales. Now, years ago my own experience taught me this, that there's only two conditions that would give you crepitant rales aside from pneumonia. Of course, in this man's case the temperature was low, and pneumonia could be excluded immediately. But there were crepitant rales at the base of that man's left lung. I told him at the time, "there's only two conditions in which this occurs, as far as I know, influenza and tuberculosis." "Now," I said, "We are in an epidemic of influenza here. My diagnosis is influenza; but I ask you not to depend on that. Go somewhere." He traveled out of Memphis. I advised him to go to Memphis and have an x-ray picture made of his lung, which he declined to do. The case passed out of my hands. I think Dr. Thompson was called to my town of Hope, Ark., yesterday, or the day before to see that man.

Now, gentlemen, I am not to be criticised because of this man's condition. The case passed out of my hands and went into the hands of

another physician, and that's usually the case when you make a diagnosis of tuberculosis. They are not satisfied; they are going to some other fellow. He has got to experiment for two or three weeks to see whether that man has tuberculosis or not. He is going to give him quinine, which is a reprehensible thing to do unless you examine the blood and find malaria; but he is going to treat that man for two or three weeks, making the clinical tests and all that sort of thing to see if that man has tuberculosis. That, gentlemen, is the reason that so many people that have tuberculosis go to the specialist when it is too late. It is not because the doctor who has examined them has made a mistake. It is because that patient himself, dissatisfied with the diagnosis, goes the rounds. I have known them in my town to go to three or four doctors, when I had made a diagnosis of probable tuberculosis, and in a year's time come back to me when it was too late to do anything for them. It is not always the ignorance of the general practitioner. It is the stupidity of the patient himself who absolutely refuses to believe he has tuberculosis.

Now, gentlemen, 98 per cent of the human family has tuberculosis. You can make your diagnosis of 100 people that come to you and you will hit it 98 times out of a hundred, that they have had tuberculosis sometime in their lives.

As a matter of course, when you get hold of a case that within a few days does not respond, you cannot find anything in the lungs especially; but the man is running afternoon temperature, and maybe a subnormal morning temperature, and your therapeutic test, if you are obliged to apply it, gives you no results, you could make a diagnosis of tuberculosis in that person's case, and be right 98 times out of 100.

DR. B. A. RHINEHART, Little Rock: Of course, tuberculosis is one of the most important subjects that we have. It is unnecessary to repeat that. However, there are certain ramifications of the question that haven't been mentioned, which, I think, need to be talked about. Dr. Smith was a little wrong in his statistics that 98 per cent of the people have tuberculosis. Dr. Opie, who has been, or is one of the leading authorities on tuberculosis, says that 100 per cent of them have positive skin tests at the age of 18. I have spent a considerable amount of my time in the diagnosis of tuberculosis in the Veterans' Bureau and in the clinic of the University of Arkansas besides private practice. The roentgenologists have stated before now that any tuberculosis of the lungs that is clinically important could be seen on the x-ray film if properly taken, stereoscopic films preferred.

One of the ramifications that I wanted to speak about is the upper respiratory tract. I have recently seen so many cases of clinically positive tuberculosis caused by upper respiratory infections that a diagnosis of tuberculosis is not complete without an examination of the nasal and maxillary sinuses and the tonsils.

I can cite two or three cases: One was a boy, aged 14, who had a brassy cough. He had loss of weight, afternoon fever, malaise, loss of appetite, and such things. This brassy cough is something that any clinician or doctor cannot mistake. It is a symptom that is remarkable in its intensity. We x-rayed this young fellow's lungs and found no apparent lesions of active tuberculosis. I say "apparent lesions of active tuberculosis" because we can find lesions of arrested tuberculosis in Dr. Opie's 100 per cent of the chests. We suspected the young fellow's upper respiratory tract and

x-rayed the sinuses and every one of them was full of pus.

Another case at the General Hospital in Little Rock had rales throughout both lungs. A request for an x-ray examination of the lungs was made and complied with. The lungs showed lesions of tuberculosis in both apices and some evidence in the bases. The case report was read before the staff meeting and the clinician that had the case disagreed with the x-ray findings. He said that the case was a far advanced tuberculosis with complete involvement of the right lung. I had to defend myself and I asked to be allowed to take films of the patient's nasal accessory sinuses. They were all full of pus. The rales came more from the pus in the sinuses than from the lung pathology.

We have seen a number of cases with a typical syndrome of tuberculosis that was due to upper respiratory tract infection, and the ear, nose, and throat men will bear me out in the statement that the nasal accessory sinuses must be particularly watched after influenza, measles, scarlet fever, and such diseases. They will fill up with pus and they will give symptoms of tuberculosis while an x-ray of the chest will be negative.

Dr. Thompson is perfectly right in saying that we cannot see small groups of tubercles on the x-ray film; but until someone tells us how many bacteria causes the clinical symptoms, we are going to have to look to other parts of the body when we have a negative x-ray of the chest done by a competent roentgenologist.

DR. CHARLES R. GOWEN, Shreveport, La.: It is quite a pleasure to discuss Dr. Thompson's paper because I have followed his work for a number of years and have the honor of being one of his students in the study of tuberculosis.

I would like to bring out just a few points on the pathology of the tubercle and why the symptoms of early diagnosis are more marked than the physical signs. That is due to the fact that all the circulatory channels, both the blood stream and the lymphatics, in the area of the infection, are open. There is no blocking and no obstruction. Until this happens; until there is a blocking and obstruction, and you get your clinical symptoms and your patient is made sick and he feels it more, you know that it is due to the fact that he has not the allergy, he hasn't the resistance, he hasn't been sensitized to the tubercle. For those reasons, you get your physical signs.

This recalls a paper that Dr. Thompson read in 1915, before the Southern Medical Society on "The Fever Thermometer and Common Sense vs. The Stethoscope and Microscope in the Diagnosis of Early Tuberculosis."

When we find these clinical symptoms, as Dr. Thompson tried to bring out, we don't want to pass them up as pathognomonic, if our physical findings and x-ray are negative. It is a matter of differential diagnosis, and keeping your patient under control, keeping him in the game and co-operating with you and not giving him a decision. It is a little hard on the patient and the family, who want a decision immediately on "Have I or have I not tuberculosis?" But if you can convince them that it is all important whether you tell them whether they have or have not tuberculosis, you will find they are willing to sit tight until you can make a diagnosis by eliminating other things. You cannot take the fact of the patient's having temperature or rales one way or the other. If he has rales and you don't find positive sputum and has temperature with it, as the doctor brought out a bit ago in the discussion,

it is not safe always to say "tuberculosis," because a tuberculous patient can have any other disease. Any of his accessory upper air passages can be badly diseased and produce more symptoms than his tuberculosis, but he is carrying a double load and that load can be lightened by making a differential diagnosis and clearing up the other problem.

The point that the patient feels sick, is important. I don't know of any other disease that produces as definite symptoms, or train of symptoms, of the patient feeling sick at one time and the next time very good. Then there is the stimulus that some individuals get from tuberculin. You will find that one patient with considerable active tuberculosis will go right ahead and work and he feels he can do more work. Some of the greatest men have been stimulated by the fact that they were absorbing a very potential poison while giving very little physical signs.

In Dr. Pretot's work at Lake Saranac, he found there was a definite type of bacillus, definitely more virulent than another type. The type of the infection and the individual with your clinical symptoms has a lot to do with it; and the biggest factors we have to deal with in tuberculosis are time, careful observation, and a fever thermometer in constructing a differential diagnosis.

DR. THOMPSON, in response: I am more than grateful for your kind and generous discussion of my paper. I am especially grateful to Dr. Shipp for eliminating the word "specialist." I do not like it. I have never liked it. Just recently I was down in Harlingen, Texas at a District Rotary Convention. On my badge was written "Tuberculosis Specialist." I very promptly obliterated the word "specialist." I much prefer to be known as a student of tuberculosis.

Every doctor, regardless of any special line in which he may be interested and working, should be a doctor first. The word "specialist" carries with it the idea of too much contraction. It reminds me of the definition describing the difference between a scientist and a philosopher. It is said a scientist is one who knows a great deal about a very few things. A philosopher is one who knows a little about a great many things. The scientist goes on knowing more and more about less and less until finally he knows everything about nothing. The philosopher goes on knowing less and less about more and more until finally he knows nothing about everything. (Laughter).

Dr. Smith is correct. We were taught that hemorrhage from the lungs always meant tuberculosis. I am sure Dr. Smith will recall with equal clearness that we were taught a great many other things to which we cannot hold today. While hemorrhage from the lungs indicates tuberculosis in a large majority of instances, it does not prove the diagnosis by any means. It is a mistake, however, when a patient has a hemorrhage from the lungs to say that it probably does not mean anything and that it may have come from the tonsils, teeth or throat. Blood coming from the lungs usually indicates a serious condition and should be so regarded. Dunham of Cincinnati, says there is nothing pathognomonic of tuberculosis. Even the germs may be supplied by a designing patient.

I am completely out of patience with the conflict that some times arises between the roentgenologist and the internist as to which is the most valuable method in making a diagnosis. Both are witnesses in the case and both should be used. No lawyer with five or six important witnesses would ignore all of them but one in presenting his case. In these early cases we need all the evidence we can get. We should use the x-ray,

the physical examination, the microscope or anything else that might supply any information. Even then we have to go slowly and take all the required time.

I grant also that the patient is an important factor in suspecting early tuberculosis. If he does not understand the early manifestations of this disease, he will likely consider them harmless and fleeting and will not consult a doctor.

In reference to the high percentage of infections as given in one of the discussions, I would like to suggest that there is a vast difference between a tuberculous infection and a tuberculous disease. A controlled tuberculous infection never produces symptoms and cannot be regarded as a disease. A tuberculous disease is where the infection has progressed to the point of toxicity and the patient is therefore suffering from clinical tuberculosis. It may be seen then that the high per cent of infections given cannot be offered as disease.

The Golden Rule in Tuberculosis is that there is no Golden Rule. (Applause).

CHORIO-EPITHELIOMA OF THE
UTERUS*

Report of A Case

M. E. McCASKILL, M. D., Little Rock
M. J. KILBURY, M. D., Little Rock

Quoting from Lynch of the University of California:

“Chorio-epithelioma is a very malignant tumor, which invariably arises in connection either immediate or remote with a pregnancy. It develops from the chorionic villi after labor at full term, abortion, hydatiform mole, and oecasionally even before the products of gestation have been expelled from the uterus. It arises from the fetal ectoderm and is composed of varying proportions of syncytial and Langanh’s cells derivatives. It is found most frequently in the uterus, but has been described in the tube and ovary.

Those tumors attract interest because of the great variation in their malignancy, since some kill most quickly, while others seemingly are benign. The frequent lack of coordination between the elinical and pathological findings which makes it impossible to determine the degree of malignancy before the tumor has run its course, and the fact that there are spontaneous cures even after the development of metastases, and the recognition of similar histologic appearanees in teratoma, all tend to make the subject one of the most interesting and debatable chapters in pathology.

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

Date	Hem.	Ct	Erythrocytes	Leucocytes	Plas	SL	LL	
3-12	15%	75	1,000,000	15,000	87	12	1	Marked poikilocytosis, anisocytosis
3-16	15	68	1,250,000	12,000	77	22	1	Polychromatophilic One nucleated red cell found
3-21	25	83	1,500,000	8,000	85	13	2	Transfusion 4-20
3-22	25	73	1,700,000	8,000	89	8	3	
3-23	32	94	1,725,000	8,250	83	13	4	
3-24	35	97	1,800,000		82	13	5	
3-26	36	90	2,000,000	7,000	80	19	1	
3-27	35	97	1,875,000					Hemorrhage
3-30			1,550,000	12,000				
3-31	16	64	1,375,000	3,000	88	10	2	
4-2	17	88	1,500,000	8,000	78	19	3	
4-3	15	62	1,250,000	7,500	87	11	2	Trans. 500 cc citrated blood
4-5	24	70	1,750,000					
4-6	26	81	1,650,000	5,000	81	16	3	
4-7	33	97	1,750,000					
4-9	32	90	1,850,000	6,500	78	19	3	Severe Hemorrhage 4-16
4-13	31		1,700,000	10,000	91	8	1	
4-19	30		1,700,000	12,000	92	6	2	

3-11- Urine. Color straw, acid, sp.gr. 1.015. Alb. tr, Sug. tr, No casts, Few pus cells
Wassermann Neg. Blood group 4 (Muss). Coag. time 6 min.

Chorio-epitheliomata are comparatively rare. The incident of the disease varies in different countries and at different times. In eighteen months, from February, 1901, to August, 1902, seven cases were found in the 2,700 autopsies at the General Hospital in Vienna; yet, in Budapest, where, for several years, the pathologists were searching for such cases, not one instance was reported.

Teacher pointed out, that in London, with more than twice the population of Vienna, only seven cases were recorded and very few from other parts of England. This is attributed to the rarity of post-mortem examinations in England and to the chance that many cases were incorrectly diagnosed as retained placenta, sepsis or sarcoma. In 1913, four hundred and fifty-five cases had been collected; in 1917, seventy-eight more; in 1919, thirty-eight more. Since then isolated cases only have been reported in the literature.

Like malignant tumors in general, the true etiology is unknown. We know, however, that with few execeptions, pregnancy has preceeded the growth; it is, therefore, a disease essentially of fertile women. The frequency of the disease runs parallel with the degree of fertility. Various conditions have been suggested as predisposing factors, such as diminished resistance because of too frequent pregnancies, previous inflammatory conditions of the endometrium, and defective formation of the decidua.

In the study of 455 cases, 45 per cent followed a hydatiform mole, 30 per cent followed abortion, 21 per cent followed labor at term, 2.5 per cent followed ectopic gestation. In six cases, the character of the previous pregnancy was doubtful. The great majority of these cases, therefore, followed an abnormal pregnancy, yet, 21 per cent followed delivery at



Plate 1. Photograph of the uterine tumor.

term and a pregnancy that had appeared normal.

In a series of 500 cases of hydatiform mole 31.4 per cent were followed by chorio-epithelioma. This large per cent may be due to the fact that ordinary hydatiform moles are not frequently reported, while those that undergo malignant changes are recorded with greater frequency.

In nearly all cases, the tumor has been found located in the uterine cavity. Though primary cases have been found in the tubes and vagina, there is some question as to whether it may arise in the ovary, as an extra placental tumor.

The period elapsing between the last pregnancy and the development of the disease, is most variable, and has ranged from a few weeks to several years.

Metastasis in chorio-epithelioma occurs in nearly all cases. It usually takes place through the blood current and may be disseminated to all the organs. Metastases in the lungs are most frequent and may give no evidence of their presence until found at autopsy; more frequently, however, they cause hemoptysis, dyspnea and pain in the chest. Next to the lungs, the vagina and vulva are most commonly involved. There may be one or more small nodules which may coalesce and nearly form a ring. They are characterized by brown or violet discoloration; the consistency is tense and elastic, almost fluctuating at times. They grow fast, cause a necrosis and ulceration which produce profuse and obstinate hemorrhage, and become infected. Metastases occur frequently in the liver, kidney and central nervous system.

The most characteristic and prominent symptoms of a primary uterine tumor is hemorrhage. This is usually profuse and may be alarming, yet, in many instances the bleeding may be comparatively slight, although protracted, simulating that which arises from retention of membranes or placental remnants. In a few cases following hydatiform mole a menorrhoea, for three or four months, has been observed. In a few, intra-peritoneal hemorrhage has been responsible for the initial symptoms in cases which, in their growth, perforated the uterus and simulated a ruptured tubal pregnancy.

Suspicion of the presence of a chorio-epithelioma should be aroused when a careful curetting shortly after pregnancy fails to arrest bleeding. The bleeding soon leads to anemia and the septic condition may intervene. The latter is particularly apt to occur when the case has been curetted several times.

Occasionally, the first manifestation of the disease may be symptoms from metastases. They are most likely to be present in cases with involvement of the lungs, and may be diagnosed as pulmonary tuberculosis on account of hemoptysis, dyspnea and pain in the chest.

Objective symptoms may be offered by the presence of vaginal or vulval metastases. They occur most frequently on the anterior wall near the urethral orifice and vary in size from an almond to a hen egg. They have a deep bluish color and appear very vascular.

While septic conditions of the primary tumor are not uncommon, pyemia does not develop, nor have organisms been found in the metastatic tumors.



Plate 2. Photomicrograph of section from uterine tumor.



Plate 3. Photograph of lung showing several metastatic nodules.

The diagnosis is often attended with difficulty. The cervix is usually patulous immediately after the removal of a hydatiform mole, therefore, it is possible to explore the uterine cavity with the finger. The presence of an elevated, fairly hard nodule with an excavation in the center is almost pathognomonic. The diagnosis is practically absolute when the characteristic reddish blue papules appear on the vagina or in the vulva.

The greatest difficulties are encountered when the growth follows an early miscarriage, because in such cases one cannot be certain that the bleeding did not follow the retention of placental remnants even though the case had been treated by curettage. One must then turn to the microscope to complete the diagnosis, although the evidence may not be conclusive and may even be misleading. The microscopic picture of the tumor in the uterus is perfectly definite, yet, there is much difficulty in diagnosing many of these tumors from curettings. Cases of chorio-epithelioma must be carefully excluded from examples of septic infections in the presence of retained products of conception. Sloughing fibroids, and rarely sarcoma and carcinoma of the uterus, may be confused with late chorio-epithelioma.

Usually, slight bleeding, fever, and a purulent vaginal discharge coming on shortly after the interruption of pregnancy and associated with an enlarged uterus containing masses of broken down tissue, form a picture suggestive of puerperal infection, yet, if the pregnancy had been a hydatiform mole, the case should be regarded with the greatest suspicion.

The chorioma can be readily and easily removed with a curette, leaving the uterine wall smooth and uniform. This treatment should be reserved for the most suspicious cases, for while the neoplasm will be benefited temporarily, the condition of the abortion case may be made worse. The hemorrhage soon returns and the uterine cavity again becomes filled with large quantities of soft tissues in the chorioma cases.

The rapid reformation (in two to four weeks) of the tissue debris is characteristic of the disease and may distinguish it from the septic retained products of conception.

Cases have been reported where an early hysterectomy was followed by the complete disappearance of the metastases. It is, therefore, evident, that neither pulmonary nor vaginal metastases are necessarily fatal, although, it should be emphasized, that the very great majority of cases with cough and hemoptysis speedily succumb.

The gravity of vaginal metastases is considerably less serious, yet, these cases must be regarded as exceptions to the rule that chorio-epitheliomata are extremely malignant tumors. There is not a uniform agreement as to the proper method of treatment of this tumor, which arises from the uterus and is usually classed as the most malignant of all neoplasms.

There is no doubt that the routine performance of a hysterectomy together with the removal of local growths will appeal to most of us as a rational procedure. Trauma incidental to vaginal hysterectomy has been known to cause wide-spread metastases. The abdo-

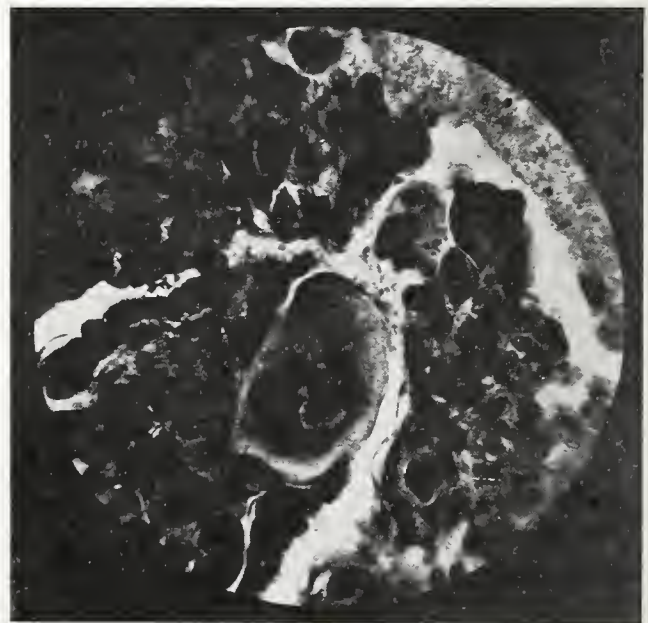


Plate 4. High power photomicrograph of portion of section from lungs showing large multinucleated syncytial cells.

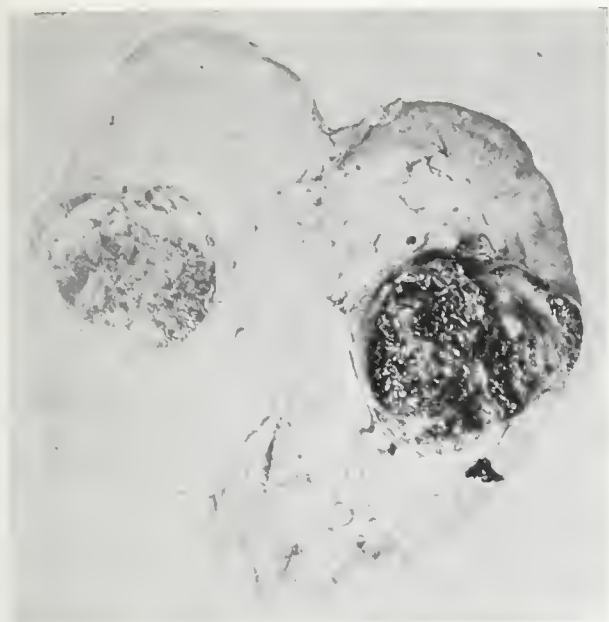


Plate 5. Photograph of metastatic tumor of the kidney.

minimal panhysterectomy is the method of choice because it necessitates less trauma.

Radium has not been tried in enough cases to warrant conclusions as to its value. There will be more or less trauma and there is danger of hemorrhage following its application, though, theoretically, it appears as the logical treatment of this condition.

Case report: St. Vincent's Infirmary. Case No. 11-28, admitted March 11, 1928, attended by one of the authors.

History of severe uterine hemorrhage five years ago, treated here by deep x-ray therapy under a diagnosis of fibromyomata of uterus. She was given two treatments, one to back and one to front of pelvis, not more than 40 per cent of a full dose of x-rays into the uterine and pelvic structures. She bore a living child at full term in May, 1926. She had no more trouble until last Christmas, when she again began hemorrhaging and this lasted two weeks; then ceased for four weeks, and began again, continuing for three weeks, with occasional profuse flow. Has had several sudden and profuse hemorrhages which lasted one to two hours and left her in a much weakened condition. A few days ago was treated at Lake Village with electric cautery and since has had foul, watery discharge. She has lost weight since Christmas.

Summary of positive findings:

White woman, age 37 years, fat, but rather flabby, extremely pale and anemic in appearance.

There was no color in the conjunctivae or other mucous membranes.

There was a mitral heart murmur.

The vaginal examination shows the following: Labia in apposition, old lacerated perineum to extreme second degree. There was a small nodular discolored area about one centimeter in diameter near the right side of the introitus and a similar area in size and appearance on the anterior surface of the vaginal wall about half way between the vaginal outlet and cervical attachment. These areas have doubtless been cauterized. There is a slight sero-sanguineous stain from the endocervix.

The cervix has an old stellate laceration and points toward the hollow of the sacrum and is about the usual size and length of a multipara.

The uterus is retrodisplaced, rather tender and apparently not greatly enlarged. Tumors cannot be palpated within or about the uterus or adnexal region, the examination is not satisfactory on account of the pelvic tenderness.

On March 20 she was given a transfusion of 500 cc. of citrated blood.

On March 27 she developed a hemorrhage from the necrotic area on the anterior wall of the vagina which was temporarily controlled by packing. She was given a general anesthetic and the two necrotic tumors were removed for examination; frozen sections were made during the operation and the condition was first reported as inflammatory, but later changed to malignancy.

On April 4, she was given another 500 cc. citrated blood; she showed a moderate reaction with much improvement of the blood picture and in her general condition.

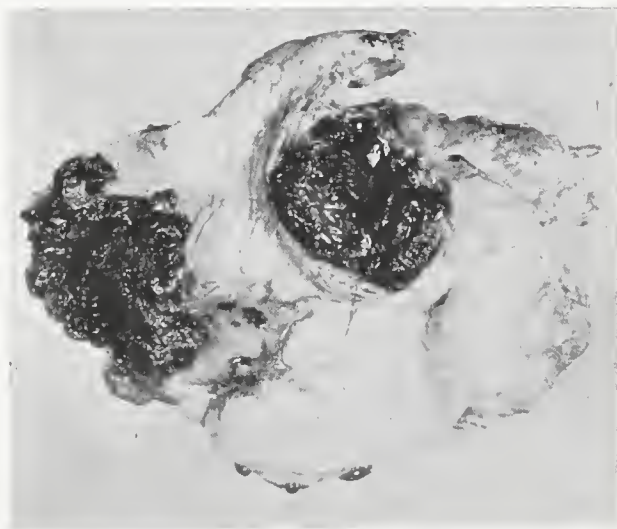


Plate 6. Photograph of metastatic tumors in anterior wall of vagina.

On April 10, an abdominal hysterectomy was performed at which time there was found a soft, boggy, pale uterus about 7 x 8 x 10 cm. in size; the ovaries were shrunken to about 1½ cm. in diameter—there were no adhesions about the uterus or adnexae. Both ovaries and tubes were removed though there was found no glandular involvement.

The abdominal wound healed kindly and no further bleeding occurred, but she developed a toxic condition and on April 21 died.

Cause of death: Chorio-epithelioma of uterus with metastases.

PATHOLOGY

In view of the comparative rarity of this condition it was thought that a rather detailed report of the pathology would be interesting.

The table on page 76 gives the blood and urine findings.

The first blood picture—March 3: Hemoglobin 16 per cent, Erythrocytes 1,000,000, color index. 75, marked polychromophilia, marked poikilocytosis and anisocytosis, one nucleated red cell was found. This picture is in keeping with that of pernicious anemia, with the exception of the color index which is below 1.

Seven days in the hospital brought about some improvement. March 20 the patient was given 500 cc. citrated blood. This was followed by rapid improvement. March 26: Hemoglobin, 36 per cent, Erythrocytes, 2,000,000. Following a severe hemorrhage on March 27, the red count dropped to 1,250,000 and the hemoglobin to 15 per cent April 3. Another blood transfusion, April 3, was followed in six days by considerable improvement; Hemoglobin, 36 per cent, Erythrocytes 1,850,000. The blood picture then remained practically unchanged until the patient's death, April 19.

The biopsy specimens first submitted to the laboratory consisted of two tumors from the vagina. One tumor was 2 cms., and the other was 3 cms., in diameter. They projected about ½ cm., above the mucous membrane and presented soft, dark red, bleeding surfaces. These tumors cut with little resistance to the knife; cut surfaces generally grayish white and granular. Frozen sections were stained during the operation. The lesion was first reported inflammatory, but later changed to a malignancy, probably epithelioma. Permanent sections prepared later showed large areas of fibrin, erythrocytes and leucocytes. Isolated nests of cells were found

in the fibrin and in the loose connective tissue. These cells were of two types. The smaller cells contained dark staining nuclei with cytoplasm well outlined by a limiting membrane. The other cells, which were not so numerous, contained large, dark staining nuclei, with cytoplasm irregular and not well defined. There was considerable evidence of necrosis, marked infiltration of leucocytes indicating an inflammatory process.

The smaller cells described above were Langan's cells and the large irregular ones were syncytial cells. The diagnosis of "Chorio-epithelioma" was based on the findings of these two types of cells.

Plate 1 shows a photomicrograph of a section of the vaginal tumor.

The second specimen submitted to the laboratory consisted of uterus, both ovaries and fallopian tubes.

The uterus was 10 cms. by 8 cms. by 7 cms., round and soft. It had the appearance of a 2 months pregnant uterus. The walls in some areas were very thin. There was a large tumor mass apparently attached to all portions of the endometrium. The mass was generally dark red, presenting grayish white areas, soft and fragile. Cut surface showed considerable clotted blood and grayish, granular areas.

Both fallopian tubes appeared normal, both ovaries atrophic.

This histopathology of the uterine tumor was similar to that of the vaginal tumors. The cellular growth was more prolific, multinuclear, syncytial cells were numerous.

Plate 2 shows a photograph of the uterus. Plates 3 and 4, sections of the uterus.

AUTOPSY FINDINGS

Subject: Female, age 37, moderately emaciated, skin yellow. Recent midline abdominal scar 10 cms. in length.

On examination of the thoracic cavity both lungs were found rather firmly adhered to the parietal pleura. The surfaces of both lungs were found studded with small nodules. These were dark red, slightly raised from the surface, from 5 mms. to 2 cms. in diameter.

Examination of the heart revealed no marked gross pathology with exception of a marked hypertrophy.

Examination of the gastro-intestinal tract, liver and pancreas, essentially negative. The spleen was enlarged and soft. There was a small, dark red nodular tumor in the marginal portion.

The left kidney was enlarged and there was a nodule in the middle portion of the cortex. On section this nodule was found to be 2 cms. in diameter, surface dark red and soft. Examination of the anterior vaginal wall revealed two definite tumors; one, 2 cms. in diameter, presented a bleeding surface, the other 2 cms. in diameter, but definitely encapsulated and under the mucous surface.

MICROSCOPIC EXAMINATION

Sections from the tumors from the lungs, kidneys and vagina show similar pictures. They were characterized by irregular strands of the two types of cells, Langhan's and syncytial cells, large areas of fibrin and considerable evidence of hemorrhage.

Sections from the nodule in the spleen showed no cells resembling those of chorionic epithelium.

By way of resume we desire to emphasize the following:

(1) Severe uterine hemorrhage five years ago which was treated successfully by deep-x-ray therapy, subsequently followed by a normal pregnancy.

(2) A malignant new growth of placental origin developing two years after a normal childbirth at full term.

(3) The rapidity of the growth which first exhibited symptoms just four months preceding death.

(4) The extreme anemia and the rapid improvement following the blood transfusions.

(5) Some of these tumors are malignant and others are benign.

(6) In some cases, after the removal of the original tumor, the metastatic new growth has been known to subside.

(7) Metastases to the vagina and lungs are frequent, but metastases to the kidney are comparatively rare.

DISCUSSION

DR. ANDERSON WATKINS, Little Rock: There is not a great deal to be said in regard to this subject because it has practically been covered. It illustrates the fact, of course, of the very rapid and wide-spread malignant tumor of the so-called chorio-epithelioma type. The syncytial cells which are mentioned in the paper and shown in the lantern slides are groups of loosely aggregated cells almost without form. If you look at them in the microscope, you will see in the stained section how boundless, how more like a mass of protoplasm they are than the regularly organized cells.

There is another thing, however, about these tumors. All decidual tumors are not malignant by any means. I remember years ago I saw a case which was brought to Little Rock to Dr.

Carl Bentley. The question which arose was whether the woman had a tumor of the uterus or whether she was pregnant. Dr. Bentley and myself, who had examined this patient, thought that she was pregnant. The doctor who brought the patient affirmed repeatedly that she was not pregnant. A bet was made by Dr. Bentley and the family physician upon the question of pregnancy. Finally an exploratory incision was made, and a pregnant uterus was seen. We closed the abdomen, and that night the uterus was prematurely delivered of a hydatiform mole. So this was an entirely degenerative non-malignant type of the decidual tumor in question.

I am here to remind you, perhaps unnecessarily, that these tumors are not always malignant but, when they are, they are one of the most malignant known. Perhaps they can be compared to the melanotic type of sarcoma or carcinoma.

DR. McCASKILL, in response: I have nothing to add to what has been said, except to emphasize the fact that these conditions are exceedingly malignant on one side and on the other they are not malignant. As mentioned before, it is a very difficult proposition. A very strange thing in the malignancy is that, after the development of metastasis and after the removal of the original tumor, cases have been known to get well. It seems almost beyond belief. We should use the greatest of care in examining our patients. This is the first case of its kind which I have seen. They are very rare as we see from the fact that there has been only some five or six hundred cases reported.

THE TREATMENT OF TUBERCULOSIS*

A. C. SHIPP, M. D., Little Rock

The successful treatment of tuberculosis demands, as does the treatment of any disease, especially those running a chronic course—a knowledge of the etiology and pathology of the disease. It is desirable that the life history of the causative organism, its avenues of entrance into the body, its methods of invasion and the body's defensive reaction, direct and indirect, be known.

Of scarcely less importance in the management of this malady is an intimate knowledge of the patient, himself. More and more are we learning the importance of the role played by the sympathetic and parasympathetic nervous systems in the complex defensive mechanism of the body. These systems in turn through their very intimate connection with the central nervous system are indirectly affected. The mental states—fear, worry, indecision, etc., use up adrenin, overwork the thyroid and disturb endocrine balance, thus striking at the base line of defense.

A patient is told he has tuberculosis. Fear grips his heart. Not only does he see his own

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

fall; but he sees left without him his home, wife and little children for whom he has planned and built his "castles in Spain;" his hearth is desolate. Grief and fear, amounting to terror, disturb the functions of the vital organs through the nervous system and strike at the defenses by consuming adrenin and thyroid products so direly needed to repel the invading organism.

Right at this part of the management of the case, as important as knowledge of the disease and medical therapeutics, is the knowledge of psychology, the power of suggestion and a kindly sympathetic attitude on the part of the physician. The diagnosis has swept the foundation from beneath the patient; this must be restored; hope must replace despair; a light must be lit in a dark heart; his feet must be placed on solid ground on the road to health and be carefully guided for months and maybe years.

Every agency that touches the emotional life of man in a helpful way, will be tactfully used to bring courage, strength, hope and good cheer. I often tell my patients that one of the most important part of the program is to keep the corners of the mouth up.

In the management of tuberculous patients from a therapeutic point of view, it is always helpful for the physician to consider his relation to the patient as that of an ally. As an ally his efforts should be directed so as to aid and strengthen all the defensive forces of the patient and to weaken the offense of the tubercle bacilli and the organisms of any accompanying mixed infection. The physician must see that optimal conditions under which the body may elaborate its defenses are provided; also, he must know the law of offenses of the invader and combat it.

Experience in the treatment of tuberculosis through the centuries has taught us that physical defenses are built up more effectively when the three following conditions are best met; complete rest, good hygienic surroundings, and a proper food supply. With these three essentials provided, nature will go far toward accomplishing a cure in most early cases and many moderately advanced ones.

In each case, as soon as diagnosis is made, the above facts must be discussed with the patient and their significance explained. In short, the physician must begin the education of his patient. The treatment should be outlined in detail, not only because a thorough understanding is necessary to an intelligent

co-operation on the part of the patient; but because there is no surer way of engendering hope and confidence than to put the patient on a definite program of treatment, a large part of which he can carry out himself. He now has something to do, an active part to play in his own rescue. He is not to lie quietly and be destroyed, but he and his physician are working together as allies to overcome the invader. The physician becomes counselor, guide, and comrade, as well as a doctor, in the estimation of the patient. When this relationship has been firmly established and the above mentioned optimal conditions provided, what further can the physician do to aid his patient to recovery and shorten the period of rest and non-productivity which is extremely important in most cases? He will, in addition to the above therapeutic measures, treat the case as he would any other infectious disease, viz., wherever he can, stimulate the body defenses, if lagging, and weaken the offense of the invading organisms. In accomplishing these ends the principal agencies used will be grouped under the following heads:

- (1) Drugs or chemicals.
- (2) Organic extracts.
- (3) Biological products.
- (4) Physiotherapy.
- (5) Dietetics.
- (6) Surgical procedures.

In this presence, I need not enter into a detailed discussion of any one of these headings; but in dealing with any moderately advanced case of tuberculosis, will take from each and all that which is applicable to his case. It is very important to remember that each case therapeutically is a law to itself, hence it is very difficult to outline any typical treatment; yet I am going to offer in a general way our method of dealing with early to moderately advanced cases of pulmonary tuberculosis from a treatment standpoint.

The patient is placed in bed at as near absolute rest as possible and kept there until fever subsides; then, very cautiously, he is allowed to begin sitting up a short time at more or less frequent intervals. If fever results rest is continued; if not, patient lengthens time out of bed and eventually takes up graduated exercises. Physical findings in chest, as well as the temperature curve, are kept under careful observation. I have not found auto-inoculation by graduated exercise of benefit in my experience. For cough, elixir terpin hydrate with codein may be used. For

fever, I have found Pyramidon satisfactory in making patient more comfortable and at the same time satisfying the demands for a "fever medicine."

In addition to general rest, I try, when condition of patient will permit, to bring about a state of physiological rest of the organs that preside over metabolism and the disposition of wastes of the body. As to method used, I will quote from a former paper. The patient is instructed as follows: "Abstain from all food except kraut juice and water, equal parts, to be drunk freely and as often as desired, take an enema night and morning until enema water returns free from all fecal material. This will require from three to five days. The kraut juice will furnish an abundance of vitamins, maintain the strength, furnish an adequate amount of water, and act as a laxative. With the complete emptying and cleansing of the alimentary tract, we no longer have the end products of digestion or bacterial metabolism to take care of; hence, the liver, pancreas, kidneys, intestinal glands, thyroid, and supra-renals have minimal demands upon them and enter a state of comparative physiological inactivity and rest during which they recuperate with a surprising rapidity. The return to solid food is by way of one day's frequent feedings of buttermilk, then the following formula is given each three hours:

Top cream, ounce I.
Malted Milk, ounce ss.
Whole milk q. s. ad VIII.

Juice of one orange is given half way between each feeding. Increase amount of formula and frequency of taking until adequate daily caloric value has been reached when solid foods may be substituted at meal times. As an aid and stimulant to the body's defensive forces, at this stage of the treatment I have found the following prescription very useful in many cases:

R
Thyroid gland.....grs. IV
Supra renal glandgrs. IV
Ext. Belladonnaegrs. II
Pulvis Myrrhae.....grs. XLVIII
M. ft. caps.....XLVIII

Sig one cap. a. c., t. i. d.

For the anorexia and nausea so frequently seen in the tuberculous, I have found the above procedure very effective. As a stimulant to the appetite and possibly the general defenses, I have found metatone often very effective.

This is a preparation containing Vitamin B Extract, nucleic acid with glycerophosphates.

To stimulate the bodily defenses, in the majority of cases I use the method of biological treatment described in a former paper read before this Society. That such stimulation is needed is evidenced by the fact that the patient has reached this stage of the disease and that it is effective and safe is evidenced by the results obtained in hundreds of cases of unquestioned diagnosis. The use of the autolysate is a very important adjuvant to the tubercle bacilli products used, as it decreases the reactions, probably due to effect of contained antibodies upon the tubercle bacilli proteids. I have found very few patients who do not improve under this treatment regardless of former treatment or lack of treatment.

Judiciously used, we have found the quartz light a very helpful agent. Care should be taken not to hurry treatment too rapidly. In my opinion, too rapid increase of dosage will be found to underlie most of the unsatisfactory results in quartz light therapy.

In tuberculous adenitis, I have found x-ray therapy a useful adjuvant to quartz light and biological treatment. These cases in children, as a rule, yield quickly to those combined agencies, more slowly in the adult. I have not seen a case of recurrence in a patient so treated to recovery.

Surgical procedures from which we have seen good results are:

Artificial pneumothorax, modified Mazingo operation, phrenocotomy, Archibald operation, and thoracoplasty. Technique and purpose of these procedures together with indications for same may be found in any recent text on chest surgery.

I wish to take this occasion to call attention to the value of artificial pneumothorax, not only in the treatment of advanced lesions of the lung, but in early unilateral pulmonary tuberculosis. The great number of patients who cannot or will not be hospitalized should not be denied this valuable aid to recovery; hence, in every town there should be one or more physicians who can at least give refills, if not initial compressions. We believe the initial compression, which is often difficult and never safe for the inexperienced to attempt, should be done in a hospital or sanatorium by one skilled in this work. After the compression has been established, in case of patients who cannot or will not remain in the sanatorium, the same may be maintained by

refills given by the home physician, who can quickly learn to give same safely. A very simple, efficient and inexpensive apparatus for refills has been devised by Dr. Sterling Bond and may be procured from V. Mueller and Company, Chicago.

In pneumothorax cases it not infrequently happens that pleural effusion occurs. If the fluid becomes sufficient in amount to embarrass cardiac action it should be withdrawn and replaced with sufficient air or nitrogen to maintain compression. If there be no cardiac or respiratory embarrassment, it is our practice to leave the fluid to absorb unless, as sometimes happens, an empyema develops, in which case we have found the reverse closed empyema operation, as done by Mozingo, a life saver as the effusion may be drained, the pleural cavity irrigated, and the lung compression maintained.

When all other methods of immobilization have failed on account of adhesions, the more formidable operations of thoracoplasty or the Archibald operation should be done since a surprisingly large percentage of cases sure to die because of dense adhesions and inability to compress may be saved by one or the other of these procedures. All complications demanding surgical treatment should be promptly cared for. We find that ethylene anesthesia is not contra-indicated in pulmonary tuberculosis.

After this brief outline of the more common procedures in the treatment of tuberculosis, I wish to remind you again that each case is a law unto itself and cannot be treated by rule of thumb. The physician must treat the patient that has the disease, as well as the disease that has the patient and not, as soon as diagnosis is made, say to his patient, "The thing for you to do is to sleep in the open, rest, and take all the milk and raw eggs you can eat;" or this other advice which reveals about the same degree of interest in patient and knowledge of the disease: "You must go West at once and live in the open or you will die. You cannot live in this climate." I am not decrying the advantages of climate in certain cases, but the habit of indiscriminately sending all cases of tuberculosis away with the expectation that they will get well without proper medical attention and supervision. Often unnecessary hardships are worked on tuberculous patients and their families by the practice of sending them far away and subjecting them to great expense when probably

they would do just as well or better at home or in a sanatorium near at hand. I speak not only from observation of many families in which the savings of years have been spent in vain, but from personal experience in the case of a member of my own family.

In most early cases the family physician, if not especially interested in the study of tuberculosis, will find it to his patients best interest, if he cannot or will not go to a sanatorium, to consult with some colleague who not only knows tuberculosis, but cares for tuberculous people. A course of treatment can be outlined in detail in the consultation and the treatment directed and carried out by the home physician. Home treatment admittedly is not the ideal arrangement, but, because of inadequate sanatorium beds available and the number of tuberculous patients in each community, it is necessary and to my mind the above suggestion is the most practical method of dealing with the situation.

In closing, I quote from Collins: "The glories of medical history are the humanized physicians. Science will always fall short; but compassion covereth all."

DISCUSSION

DR. BERTRAM L. WARE, Greenwood: One question I want to ask Dr. Gowen, and that is, do we have different types of tubercule bacilli as we have different types of pneumonia; for instance, 1-2-3-4. Many times we all have this experience in which we see a young girl say from sixteen to twenty years of age develop tuberculosis. Her hygiene is good, she takes her rest, her food is good, and yet that patient goes right on down and dies. Again, we have a similar case develop in a married lady of thirty under more adverse circumstances, too poor to have good hygiene or good food, or to have the necessary rest and yet that case will hang on for years and years, eventually going into that fibrous type, living out her expectancy, and probably dying from causes other than tuberculosis. What's the difference? Are we dealing with a different type of bacilli, as in pneumonia, or not?

Dr. Shipp spoke of the ultraviolet light. I am going to make a prediction. I believe that the man or the scientist, or the doctor who discovers how to pass the ultraviolet light through lung tissue as the x-ray passes through it; will cure tuberculosis in any stage.

DR. S. W. DOUGLAS, Eudora: I am very much encouraged in regard to the progress that is being made in the treatment of tuberculosis. I remember about three or four years ago, Dr. Shipp read a paper before this Society on the treatment of this disease and, in comparing my recollections of that paper with what he has to say today, there is certainly a great deal of improvement. The paper today indicates a much more rational treatment. I remember at that time he had a great deal to say in the praise of serum treatment. I don't recall just now whether it was turtle serum or not. Very few of us will pin any faith what-

ever to any serum known to the medical profession for the cure of tuberculosis. That the treatment is still unsatisfactory is attested by the fact that Dr. Shipp enumerated probably a dozen different remedies. That is proof that we are still groping in darkness in regard to the treatment of this disease.

A great deal of research and study will have to be done before our knowledge of tuberculosis is satisfactory. The early diagnosis is still very uncertain. Each individual doctor is adding his mite to the solution of these problems. Chevalier Jackson announced just a few days ago that he had devised a bronchoscope with a strong light attached with which he is trying to diagnose chest conditions by transillumination.

I was reminded yesterday, during the discussion of the papers on sinusitis, of the uncertainty of the treatment of so simple a condition as a common cold. To illustrate the evolution of this treatment I will relate that when I was a boy my mother treated my cold by soaking my feet in hot mustard water, greased them with tallow, baked them by holding to the fire and applied to my neck a yarn sock saturated with goose grease and coal oil. A few years later there was a theory advanced that a common cold was caused by a deficiency of alcohol in the blood and that all you had to do to cure it was to supply that deficiency by taking copious hot toddies, eggnog or some other palatable form and you were ready for work next day. Just a few days ago, a prominent German announced that colds were produced by an acidosis and that they could be easily cured by alkalizing the blood. I recall that about four years ago, my friend, Dr. Mann, read a paper before this Society advocating the serum treatment of colds. He cited phenomenal cures. Two years later, he had a room prepared and was administering chlorine gas and getting wonderful results. And yesterday he was supplying vitamin A. (Laughter). Is he to be criticised? No. He is only doing his best with the material at hand to relieve this distressing condition. These changes go to prove that we are in a progressive state and that we are looking to the future with optimism.

Now, gentlemen, my plea is for the rational, approved treatment of tuberculosis and all other pathological conditions. Let's not follow every new fad of treatment, for the fad of today will most probably be the fallacy of tomorrow. For a doctor to prescribe any remedy that is not Council Passed is taking an unnecessary risk. Following fads will jeopardize his reputation and the life of his patient. (Applause.)

DR. CHAS. R. GOWEN, Shreveport, La.: With Dr. Shipp's permission, I would like to mention a little about the classification of the tubercle bacilli as shown recently by Dr. Petrof of Saranac Lake.

If you will look back in the files of the Journal of the American Medical Association to July 23, 1927, you will find an article that will give you a little insight into this classification. He has also published a lot of other works in other journals that possibly are available in the larger libraries and larger cities. He has definitely found that in the ordinary case of tuberculosis two types of bacilli exist; one is non-virulent, is of the same type of growth, looks the same, stains the same and is of the same size, but it produces different shaped colonies. He does this by culture, grown on a special Petrof media. The other is very virulent and will produce disease in the guinea pig in an ordinary length of time. The average term is 45 to 60 days, and the guinea pig will die. With the other colony, the non-virulent type, in-

numerable injections failed to produce any disease. It is quite a definite thing and has been published only in research journals.

I was with Dr. Petrof several weeks last fall and saw them grow, both in the human, bovine and avian type, and I think it is a step in the right direction. The guinea pig will be inoculated with one type and fail to produce a serum reaction under the other.

At Saranac Lake they have a routine complement fixation test. In a certain number of those cases they found they had positive sputum, and the patient didn't have a complete fixation and it was found that it was due to the fact that one or the other germs predominated.

Just a word about the treatment of tuberculosis. Dr. Shipp covered almost the whole field of medicine in the treatment of tuberculosis, because you have got to cover it when you begin to treat a man with a disease, with tuberculosis and the other diseases that he might have. We have no specific treatment as yet. The disease itself does not produce a lasting immunity; only at times a relative immunity. When he thinks he is well, he is not well. And the job of keeping a patient well is as hard as getting him well.

The essayist used the word "management" quite often instead of treatment, which I think is as important as treatment. In a case of tuberculosis, you have to use management; since, besides treating the patient, you have got quite often to treat the family and the community, which is a very difficult job. But the essayist covered the field very thoroughly. I enjoyed the paper.

DR. SHIPP, in Response: I wish to thank Dr. Gowen for answering Dr. Ware, reviewing the work of Petrof, and summing up the progress made along this line to date.

In regard to Dr. Douglas' opening remarks with reference to a paper I read about four years ago, will say that the subject of that paper and the subject matter was quite different from the subject matter of the paper today. One was the development of a specific line of research along the line of development in treatment of tuberculosis. This today was very largely along the line of the management of cases of tuberculosis and included treatment as well as the relationship with the patient, hoping to stress the importance of the proper encouragement and attitude between the patient and the physician. Now, if I were to write a paper on the subject upon which I wrote four years ago, I probably would without question say most everything I said then and, if possible, say it stronger, fortified by four and a half years of experience. You know the proof of the pudding is in the eating. I suppose very few people have had the adverse criticism that I have had in certain respects because of a failure to closely read the paper that I wrote and read before this assembly. I was laying down certain principles, general principles, that have been tested and worked out in various laboratories and agreed upon, going just a little bit farther with the experimental work and reporting results. Time has justified those reports.

So far as the advance of medicine is concerned, we might just as well be living in the days of treating all respiratory diseases with goose grease and coal oil, and I am not decrying that method, of treatment. Goose grease, lard and coal oil might be par excellence remedies for the upper respiratory diseases. I am not saying they are not, but we are not treating all of them that way.

We must cautiously work out and try to improve if we expect to keep in the pace set in medical improvement.

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Editorial

DOCTOR W. D. ROSE
AN APPRECIATION

August 1st will long live in my memory. I
spent the day with Dr. Rose. Breakfast to-
gether; the morning spent in making calls on
faculty members of the Medical Department of
the University; lunch at the Marion Hotel;
further calls on teachers—and goodbye. This
was the end to a friendship that had lasted
for eleven years.

In May of 1917, a manuscript came to our
office on "Physical Diagnosis," written by a
then unknown and comparatively young man
from Arkansas. I shall never forget with
what uncertainty of feeling I opened the pack-
age and examined the contents. For the life
of me I could not keep out of my mind the re-
tort of the unbelieving populace when the
fame of Christ was spread, "Can anything
good come out of Nazareth?" said they. "Can
a really worthwhile book come out of Arkan-
sas?" kept running through my mind. One
reading of Dr. Rose's manuscript on "Physi-
cal Diagnosis convinced me that a real book
had been written by a young man, and that
he was a product of Arkansas, by birth and
education. This was the beginning of a friend-
ship that grew and ripened into almost de-
votion.

Truly men live in deeds, not years. Most
men who achieve are compelled to wait the
passing of many years before they see their
work bear fruit. Not so with Dr. Rose. At
the age of forty-one his work in the field of
physical diagnosis was recognized at home and
abroad. His plan of approach to the making
of a diagnosis, from three angles, clinical an-
atomy of the organism involved, clinical path-
ology present in the organ resulting from the
disease, and the involvement of the princi-
ples of physics in making the examination,
marked an epoch in books on the teaching of
physical diagnosis. Today this plan of ap-
proach has been incorporated in most of the
recent books on diagnosis and is used in teach-
ing the subject in the majority of American
medical schools. Dr. Rose first called atten-
tion to this method of teaching in his book in
1917. Prior to this time most authorities on
diagnosis were located east of the Alleghanies.
New York, Boston, Philadelphia were the
haunts of the experts with the stethoscope and
the fingertips that carried an all-seeing eye.

Even now I can see on Memory's walls the picture painted of the surprise that attended the shifting of authority on diagnosis from the old heads in eastern cities to a young man in Little Rock, Arkansas.

Dr. Rose seemed especially adapted successfully to practice medicine. Never have I seen a more logical mind. His ability to cut away everything unneeded in making a diagnosis except the exact principles involved in the case was almost uncanny. At lunch with him August first the subject of coronary embolism was under discussion. He handled it with a masterly touch. I smile now as I recall his remarks about so many cases of coronary embolism being diagnosed as acute indigestion. Analytical, accurate, weighing with precision all facts for or against the premises, he seldom failed correctly to solve medical problems coming under his observation.

And his heart was just as big and warm as his mind was keen. Nature was kind when she endowed him with the kingly graces that go to make the ideal physician. Knightly in appearance, courteous, kind, always optimistic, and always a harbinger of good cheer, his presence in the sick room was a tonic within itself.

Why life can be so kind, and yet so cruel has baffled me. Why the good die young brought furrows to the brows of the Greek philosophers. The mystery is just as deep and dark today as in the time of Socrates.

Why, with so many talents to be used to benefit and bless mankind, was not some superman power given to Doctor Rose as he struggled in the swift, dark waters? Why was he not carried to the shore instead of to the bottom? Who can tell?

Those who knew Doctor Rose are not surprised at his utter disregard for his own life in trying to save others in distress. It was always thus with him. To those needing his services they were given without stint and with no thought of material gain. His life and achievements forever set at rest the fallacy that a prophet is not without honor save in his own country. In Little Rock, Doctor Rose's home town, where he was born March 17, 1887, where he was educated, and where he practiced medicine, are to be found his best friends, his most ardent disciples.

Hail and farewell. I met you on your native health, while life was young. I have been inspired by your teachings, softened

by seeing your kind and generous treatment of your fellowman, and strengthened by your logic. To me your memory will ever be a benediction and a blessing.

DR. C. V. MOSBY.

Editorial Clippings

MODERN MEDICAL ETHICS

Calling Consultation

When shall the family physician call in others to consult and advise him? This problem is a frequently recurring one. It is relatively easy of solution, if the patient suffers from disease of some special organ and the disease is well localized. For instance, if the patient has some disorder of the eye, the attending physician usually knows at once that he is not especially competent to treat it and is quite ready to call in the ophthalmologist. If he does not do so, most people these days are well aware that there is a specialty ophthalmology and they demand a consultant who follows it. But if the disease is an obscure one of the internal organs, the family is not well equipped to make a decision and there is sometimes a tendency on the part of the attending physician to try to manage the case alone. Even though he knows he does not fully understand the trouble, oftentimes he believes he can do as well as the next man.

In the cities the problem of consultation is not as difficult as in the country. In small towns there may be but two or three physicians and, should one of them get the habit of calling a competitor in consultation, he realizes the danger that he may be enhancing the other man's reputation at the expense of his own. But in the city this difficulty does not often arise for the reason that here are men specially trained in all lines who may be called on for help in difficult cases, and the general practitioner may obtain assistance that will genuinely assist, with danger of minimizing his own importance.

In a general way, the best equipped practitioners are most ready to call in consultants. They are sure of themselves, self-confident and have no inferiority complex. Even though they feel they are able to manage the case satisfactorily, they are ready to call consultants at the first hint of dissatisfaction on the part of the patient or his family. They realize that, if a patient lacks faith, they are better off with-

out him. Or, if things go wrong, they believe that good consultation divides responsibility and good consultants help to smooth the pathway for them.

Trifling cases do not need consultation and no wise physician calls in such assistance without good reason. Even severe cases many times do not benefit from consultation. But he is a wise physician who, sensing dissatisfaction, is ready to seek or call someone who, having special training, will probably understand the problem and may be able to give help or if not, will make the family feel that everything reasonable and proper has been done and that nothing may be added to combat and defeat the Grim Reaper. No special skill is necessary, as a rule, in settling the problem but only good common sense and he who possesses an abundance of that always desirable quality is less apt to fall into error than is he who prides himself on supererudition.

On calling of consultation in cases in which the physician rather than the patient desires it, little need be said except to point out that frequently, when the physician asks for consultation, the family is inclined to hold him responsible; that is, they are often unwilling to pay the consultant's fee on the ground that he was called for the benefit of the physician rather than of the patient. This attitude, of course, is only rarely noted with educated persons, but is common practice among the ignorant. Though it is well to protect oneself against it, every physician should realize that if he wants consultation, whether the family desires it or not, he is entitled to have it and he is neglecting his duty if he fails to request it. If the patient is poor and cannot pay, the consultant should be as willing to render services gratis as is the average general practitioner to serve patients who are in real need without regard to compensation.—*Northwest Medicine*, August, 1928.

Abstracts

WHAT AMERICAN MEDICAL ASSOCIATION EXPECTS OF TEACHING HOSPITAL

In answer to the question, What is to be expected of the "teaching hospital," N. P. Colwell, Chicago (*Journal A. M. A.*, Aug. 18, 1928), replies: Every hospital is, or should

be, a teaching hospital. There is no hospital which does not have an educational function which if carried out will enable it to render a better care to its patients and react beneficially on the institution itself. It is the educational activity in a hospital which provides the real urge for development in other respects leading to a constantly increasing service to humanity. The largest educational opportunities undoubtedly rest in the hospital connected with an under-graduate medical school, in which, usually, all members of the staff are also members of the teaching faculty. It is this type of hospital which commonly furnishes every variety of medical instruction and which, undoubtedly, has reached the highest development as a teaching hospital. Such instruction, briefly, would be for medical students, nurses, interns, residents, staff members, other physicians in the community and, possibly, extension courses for physicians located in the more remote districts. To an increasing extent, the hospital is acting as a continuation school for the further development of practicing physicians themselves. In recent years it has become recognized that the percentage of deaths on which autopsies have been performed is an index of the hospital's progress and efficiency. This is not due to the mere fact that autopsies have been obtained but that the hospital is securing the highest educational value from them. This requires the keeping of careful records, the comparison of symptoms and physical observations with the actual causes of death as revealed by the autopsy, and the presentation of such facts in staff conferences. The three chief essentials in a teaching hospital are: staff and other personnel; board of directors, and hospital plant. Colwell says the hospital is a convenient and safe place for modern practice and a center for training in specialization.

COMMON DERMATOSES ENCOUNTERED AMONG TUBERCULOUS AND NON-TUBERCULOUS EX-SERVICE PATIENTS

Common dermatoses encountered among tuberculous and non-tuberculous ex-service patients is the subject studied by F. J. Eichenlaub, Washington, D. C. (*Journal A. M. A.*, Aug. 25, 1928). He concludes that Tuberculosis of the skin among tuberculous patients was found to be infrequent. Lupus erythematosus was found only once in 759 cases with

tuberculosis. Among a total of forty-five cases of lupus erythematosus the incidence of tuberculosis was 11.11 per cent. The incidence of tubercle among tuberculous patients was greater (0.40 per cent) than among the non-tuberculous patients (0.17 per cent). Fifty per cent of the patients with tubercle had tuberculosis, whereas the incidence of tuberculosis in the whole group of patients with skin disease was 22.81 per cent. Tuberculosis was notably less prevalent in patients with psoriasis. This is the only common disease, and indeed the only disease in the hospital group, which did not occur in conjunction with tuberculosis. Among a total of ninety-six cases of psoriasis, only four, or 4.16 per cent, showed the presence of tuberculosis. Among syphilitic patients in general in this group, tuberculosis is as frequent as among non-syphilitic patients, but among patients with neurosyphilis tuberculosis is less prevalent. From a study of the literature and from the results of this study, it would seem hazardous to associate any skin disease with tuberculosis because it occurred in tuberculous patients.

LOW BACK PAIN

John T. O'Ferrall, New Orleans (Journal A. M. A., Aug. 25, 1928), concludes that the majority of the acute and many of the chronic backaches occur in young adults below the age of 45 as a result of sprain of the lumbosacral ligaments. The strain generally occurs more frequently in males engaged in laborious work, athletics and others in awkward posture, namely, flexion, semiflexion and twisting of the torso, especially on impending muscular effort, as lifting and pushing. The lumbosacral joint is normally a most unstable joint and in studying its anatomy insufficient emphasis has been placed on the ligamentous "guy-rope" and the relation of the bony structures to one another, whereas underserved importance has been given to the bony abnormalities. Gross pathologic changes exist, as hemorrhage; fibrous adhesions or pannus formation and swelling of the ligaments with pressure on the lumbosacral cord and other parts of the lumbar plexus; protective tonic spasm of the lateral spinal muscles from nerve pressure, and often toxic absorption. Flat roentgenograms are of little value. Stereoscopic and lateral views of the joint are very helpful and probably essential. Treatment to be effective must represent fixation of the

lumbar spine to the pelvis, thoroughly carried out and prolonged for a sufficiently long time to permit healing of the truly sprained ligament and resolution of the pathologic changes that usually occur.

Personal and News Items

Dr. L. E. Moore of Searcy has recovered from a recent illness at Trinity Hospital.

Dr. and Mrs. R. N. Manley and their daughter of Clarksville recently visited in Little Rock.

Dr. and Mrs. O. M. Bourland of Van Buren spent the summer in Northern Michigan.

Dr. and Mrs. H. A. Higgins of Little Rock spent the summer in California.

Dr. R. B. Corney of Little Rock announces that he has moved his office from 108 West Ninth Street to 909 Scott Street.

BORN—To Dr. and Mrs. Glen M. Holmes, Little Rock, August 21, a daughter.

Dr. W. F. Wilson has moved from Bradford to Pleasant Plains.

If you have not already joined the Southern Medical Association, we would suggest that you send four dollars (\$4.00) to the Secretary at Birmingham, Alabama, and make reservations for a meeting which you will always remember with delight.

The meeting of the Southern Medical Association will be held this year, November 12 to 15, at Asheville, North Carolina.

Dr. R. J. Calcote of Little Rock, associated with Drs. Caldwell and Mahoney, will leave September 18th with his wife and son for a three months post-graduate course at the Eye Clinics of Vienna, Berlin, Paris and London.

Dr. and Mrs. M. J. Kilbury and family of Little Rock have returned from a recent visit to New York.

Dr. L. J. Kosminsky of Texarkana was recently elected State Commander of the American Legion of Arkansas.

Dr. Hoyt R. Allen announces the opening of offices at 841 Donaghey Building, Little Rock. Practice limited to Proetology.

Dr. Hardy V. Hughens announces the opening of offices in the Donaghey Building, Little Rock. Practice limited to Gastroenterology.

Dr. Geo. F. Jackson of Little Rock has been appointed Medical Director for the Mutual Aid and Pyramid Life Insurance Companies.

As we go to press this month the enrollment at the University of Arkansas, School of Medicine for the session 1928-29 is reported as 147, including 49 Freshmen. A considerable number of additional entrants is expected.

Communications

To The Journal of The Arkansas Medical Society:

As President of the Class of 1916 of the Medical School of the University of Arkansas, I desire to give brief testimony of the regard in which his class held the late Dr. Wallace D. Rose, whose tragic and untimely death occurred August 17th.

Doctor Rose was the honor student of his class. He was held in the highest esteem by faculty members and students alike. The qualities that were later to mark him in his professional life were already apparent to all who knew him.

As a physician, Doctor Rose became a successful gastro-enterologist; and although his years of practice were few, he attained a distinguished place in the profession. Cut off just as he was reaching the best years of his life, his passing is a serious loss to the medical profession of Arkansas. Those of us who knew him best, and therefore appreciated him most, feel very deeply the loss we have sustained. His death, though tragic and unusual in its circumstances, was after all not inconsistent with his life. At an unexpected moment he gave his own life in a heroic effort to save the life of another.

Sincerely yours,

H. E. MOBLEY, M. D.
Morrilton, Ark.

Obituary

ROSE, WALLACE DICKINSON—Dr. W. D. Rose, Little Rock, Died August 17, 1928. Aged 41.

He is survived by his widow, a son, U. M. and a daughter, Lillian.

RESOLUTIONS OF RESPECT ON THE DEATH OF DR. W. D. ROSE

WHEREAS, Through the workings of Divine Providence, Dr. W. D. Rose was called upon to sacrifice his life in an effort to save the lives of others; and,

WHEREAS, Dr. Rose so nobly and bravely met the requirements of said Providence; and,

WHEREAS, Dr. Rose had accepted an invitation to address this meeting,

THEREFORE, be it resolved by the White County Medical Society in session at Griffithville, Arkansas, September 6, 1928, that we deeply deplore the untimely death of Dr. Rose, and that we feel that we have suffered a distinct loss, and furthermore be it

RESOLVED, that we wish to extend to the bereaved family our sincere sympathy.

Respectfully submitted,

F. P. HARDY, M. D., Secretary.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

Benton County Medical Society held its regular monthly meeting, August 9th, at Bentonville. This being one of the most interesting meetings of the year.

Present: Members: Hughes, Duckworth, Smiley, Steele, and Wilson of Siloam Springs; Thompson of Gravette; Atkinson of Bentonville; Lindsey, McNeil, Love, Moore and Rice of Rogers; Highfill of Cave Springs; Greene of Pea Ridge; Harrison of Lowell. Visitors: H. D. Wood, E. F. Ellis, and Andrew S. Gregg of Fayetteville; T. L. Cooper of Elmsprings; R. L. Sellers of Westville, Okla.; J. A. Robinson of Cincinnati; F. T. H'Doubler of Spring-

field, Mo.; Wm. Moek of Prairie Grove; General Pimmell, M. M. De Arman, and B. W. Ralston of Miami, Okla.; J. S. Southard, W. R. Brooksher, and Walter Eberle of Forth Smith; R. T. Henry of Springdale; Leon Rosenwald and G. E. Knappenberger of Kansas City, Mo.

The scientific program was as follows:

“Hematuria a Symptom” by Dr. Leon Rosenwald.

“Colitis, Its Cause and Treatment,” by Dr. Geo. Knappenberger.

Both papers were well presented and elicited a general discussion.

HELP WANTED—A good doctor to share office with view of taking over entire practice in few months. This is an ideal location and money can be made from the start. Address all replies to H. C., in care Arkansas Medical Journal, 814 Boyle Building, Little Rock.

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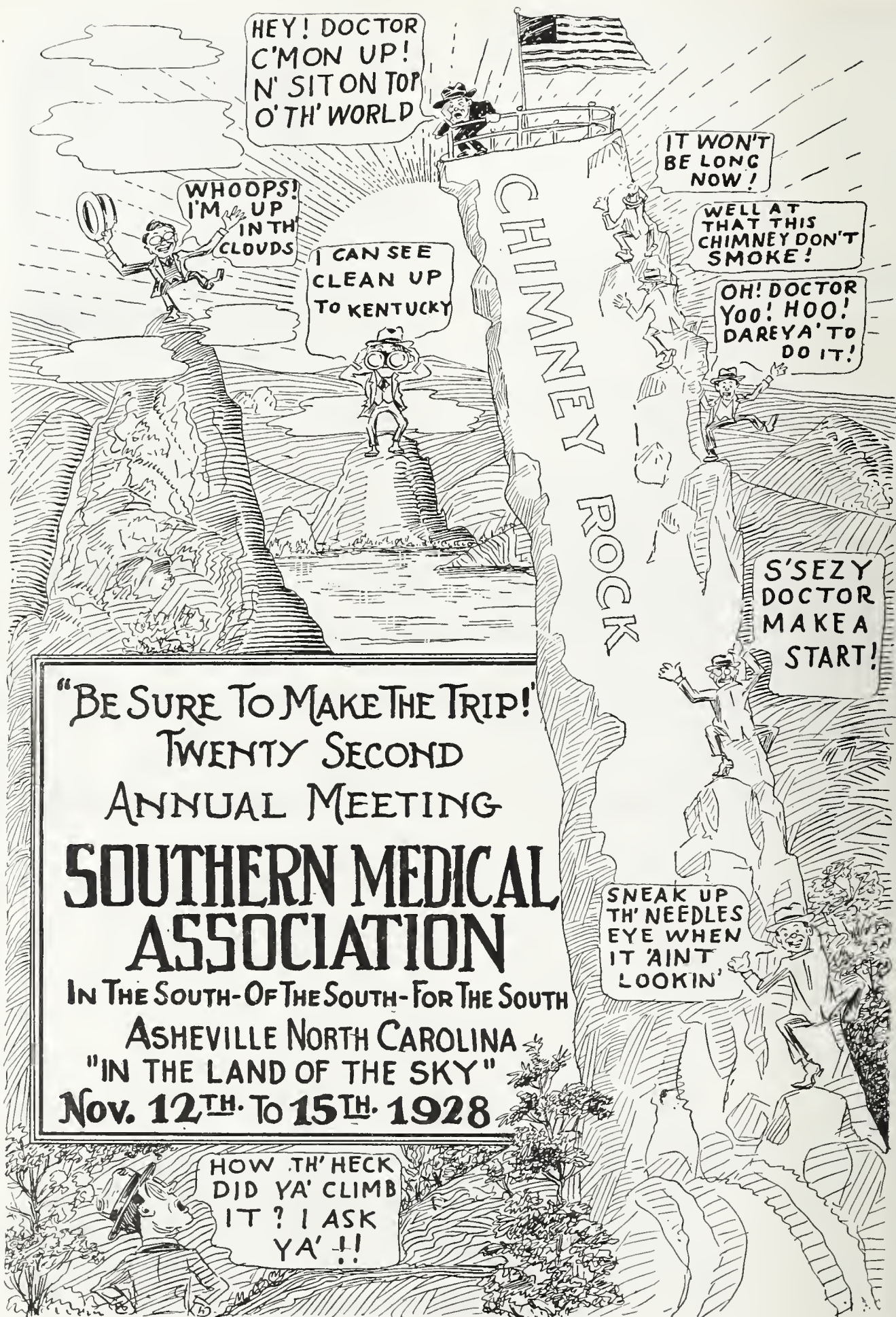
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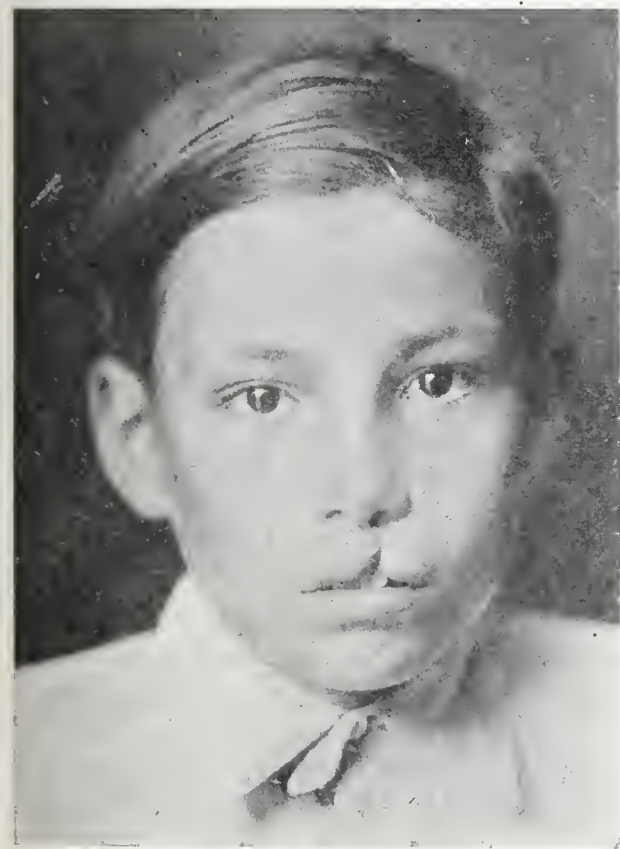
Original Articles

CARE AND TREATMENT OF CLEFT LIPS AND PALATES*

F. WALTER CARRUTHERS, M. D., F. A. C. S.
Little Rock

"By the term cleft lips is meant a congenital fissure in the upper lip, due to failure of

lip and palate is that they have a predisposing and exciting cause. For the predisposing, heredity plays the most important part, while other defects such as supernumerary teeth, or intervening mucosa which prevents the tissues from uniting must not be overlooked. Maternal prenatal impressions have their firm belief with mothers here as else-



Boy, Aged 9—Single Cleft Lip



Result of Treatment

the superior maxillary and pre-maxillary processes to unite in early embryonal life. The direct cause is not definitely known."

The literature on this subject is voluminous and largely conjectural. About the only thing really known about congenital cleft

where. However, defective nutrition or general debility of the mother during the early months of gestation, more than any other cause, may delay union of the palate or lip is sound etiological factor rather than prenatal impressions.

CLASSIFICATIONS

Cleft lips may appear as only a slight notch, it may be complete or incomplete. It may

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

be single or double or complicated. They may be partial on one side and complete on the other, or partial on both sides and it may be complete on both sides. As to the palate, we have the complete and incomplete or cleft palate with atresia. The cleft may be in the soft or hard portion.

The pre-operative study of the patient should be the first and foremost consideration after the condition of a cleft lip or palate has been established. We know that a new-born

Again, referring to the fact that we have the diagnosis established, the preparation of the patient for operation will be the next consideration. Before operation, the physician should look into the general condition of the child. I am sure that it has been the experience of every surgeon, that infants who have cleft palates are badly nourished. Steps should be taken immediately to aid the child in every way possible in the proper deglutition of its food. Many mothers who make use of



Child, Aged 5—Single Cleft Lip. With Cleft Palate



Result of Treatment

child usually weighs more at birth than it will a few weeks later. Cleft palate children rapidly lose weight. It is, therefore, the duty of the attending physician to make a careful examination of every child at birth to discover possible defects or abnormalities of any nature. I know of a number of cases in which cleft palates, particularly have been overlooked in early life. This may sound absurd, but it is the truth.

The symptoms are usually detected in swallowing and regurgitation through the nose, consequently, the child is irritated and distressed by its inability to get proper nutrition. Usually it develops gastro-enteritis, loses weight and may die of starvation.

bottles for feeding infants, have not the proper knowledge of sterilization and as a rule, the baby develops gastro-enteritis and other complications, which must always be cured before an operation is attempted; therefore the first duty of the surgeon before operating, is to consult a pediatrician with whom he will study the physical condition of the child. All of the organs of the body should be functioning normally, and operate only when you are satisfied that the patient is not ill in any respect, therefore, the services of the pediatrician should be had at all times until the patient is dismissed from the hospital.

In the series of cases which I wish to present, fifty in number. I have lost two cases.

both being due to status thymico-lymphaticus; therefore, a study of the thymus glands is of great importance. We know that status-lymphaticus is a serious menace to surgical procedure in young children. Its pathological significance cannot always be determined by the physical examination; therefore, x-rays should always be made and should an enlargement be shown, proper x-ray treatment should be carried out before the operation.

After the physical condition of the child has been given due consideration, the next thing to decide is, when to operate.

In the early literature on cleft palates, special reference has been made as to the favorable time in life to perform these operations. The teaching and practice of surgeons in the early days, with few exceptions, were opposed to operating in early infancy. Dr. Truman W. Brothy (1) as early as 1885, having become



Child, Aged 6; Single Cleft Lip



Result of Treatment

For your information, I wish to state that the two cases I lost were among the last four operations I did. Often one treatment by the x-ray over the thymus, and seldom more than two, will clear up the condition so that operation can be done six weeks following.

I am satisfied that the mortality following operations upon the palates can be markedly decreased, when such precautions are carried out prior to the operation. The surgeon who operates a sick child cannot hope for success. I am sure that no surgeon would do an operation, knowing the child was in poor physical condition, and I am sure that you have had the experience the same as I, that too frequently the child is carried to the hospital by its parents and an operation is requested at once.

familiar with the early methods prior to that time, employed by surgeons throughout the world made a very careful study of the deformity from every viewpoint and concluded that the best time to close the palate was as early after birth as the health of the child would permit. His conclusions were that the cleft palate is a fissure, a separation of well developed parts; not, with rare exceptions, the result of arrested development or failure of the normal quantity of tissue to enter into its structure. He thinks, therefore, that it should be closed in early infancy when it can be accomplished most easily with less surgical risk and better results than at a later period in life. Our later text books and professors of surgery, with few exceptions have taught that congenital cleft lip should be operated in early

infancy (2). The question of early operations has long since passed the experimental stage. This question is answered very forcibly in the following illustration:

A surgeon never hesitates as to his duty in the presence of a wound, his first impulse is to close it. Should a family with a young infant meet with an accident and receive injuries of the same nature, with the result, that the child sustained a complete cleft of the lip and palate, the bones being forced apart by the injury, would the surgeon suggest operative procedures a few weeks later or a few months or a few years? Certainly not! The same reason exists why one of a congenital cleft palate should not be delayed (3).

With a given case of a complete cleft lip and palate in a child just born in the hospital, what should be the procedure? I am firm in my belief that the following should be done, when practical, barring physical defects.

First: The operation on the bone when complicated with cleft lip, single or double, should be done at once; but the operation on the lip about six weeks later.

The bones are freshened, that is the premaxillary bone is freshened and firmly immobilized, so that union can easily take place; therefore the bone operation should be done as early in life as practicable. From the first month up to the age of five months, the bone may be easily approximated. Beyond the age of six months, the portion of ossification is so far advanced and the bone is so dense that bending and moving them into contact is difficult. The wire suture and plates used in this procedure will be illustrated by lantern slides. The soft palate should not be operated until the age of sixteen to twenty months. The reason for delay is that the muco-periosteum removed from the bone is frail and likely to break down, and if the child is operated before he speaks, articulation will be correct. After the closure of the bone, six weeks later, the lip is closed, then the soft part is closed from the age of 16 months to 22 months.

Unfortunately, it is the practice of many surgeons to attempt to close the lip first before the bony structure has been brought into normal contour. This procedure, to me, seems as irrational as a contractor building the roof of a house before the foundation is laid. However, the lip can be closed before the bony structure has been replaced; but it is much easier, and far more satisfactory to all con-

cerned, to follow the procedure as outlined (5).

The most important reason for the early operation is when made in early infancy, a normal condition is established, which enables the patient to speak as children should, when born without this deformity.

CONCLUSIONS

(1) Careful examination should be made of every child to discover the presence of cleft palate.

(2) Patients with cleft palates or lips should be very carefully examined for any general constitutional defects before an operation is attempted.

(3) See that these patients are in the best physical condition before the operation.

(4) Operate as early as is practicable and when physical condition warrants.

(5) Operations in early infancy will make possible the correct speech for the child, who is born with this deformity.

(6) A child with only a cleft lip should be operated at once.

(7) A child with complete cleft lip and palate, the following method of closure should be carried out.

(8) Close the bony structure first; the earlier, the better.

(9) Six weeks after the bony operation, repair the lip.

(10) At 16 to 22 months, close the soft palate.

(11) Routine examination of the thymus is essential.

(12) The success and the results obtained cannot always be scientifically traced to surgery itself.

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DISCUSSION

DR. G. A. WARREN, Black Rock: I wish to emphasize the importance of looking after deformities of new-born children. It is very embarrassing to the accoucheur for him to have delivered a baby and come back a few days later and have the neighborhood women point out the defects that he has overlooked. It is just as important to look your baby over as to see to the mother. Look at the genitals, as well as the mouth, and you

should not neglect either. And it is very important indeed, if it be a boy, to see that the child's foreskin is not adhered or closed; so that you will not have to be called back to open that up. Not only that, but the feet, the legs and every other part of the child, ought to be thoroughly examined when it is born, so that you will not have the embarrassing experience of having somebody call your attention to the defects that you have overlooked; and besides you should be able to tell the parents what ought to be done to correct these natural deformities. (Applause).

DR. J. K. SMITH, Texarkana: I agree with Dr. Warren that we should examine the child all over to see about the deformities, I have one now that I am in doubt about. I don't know whether that baby is a boy or girl.

Speaking of these cleft palates and hare-lips; I have one now where I am waiting for the child to build up before surgical procedure.

The essayist has a good method. Every man doing this work in a large measure has a peculiar technic. If you are going to do this work, the only thing is that you must have a definite plan. In other words, you must make a definite technic of your own or follow the technic of some one else. Personally, I don't feel like following the method of Brophy, in closing these clefts with wire. But no one can study the results of Brophy without conceding that it is an excellent method.

I don't think there is anything that gives you a more hopeful feeling or makes you proud of yourself, than to have one of these little fellows born with these clefts and note the horror on the parents' faces, to be sure that something can be done for them and the results you can obtain. But don't expect that with one operation you are going to secure results and make even a respectable looking child out of your patient.

The last time I was in St. Louis I saw Blair do an operation on a child, which I thought would have an excellent result. A boy seven or eight years old was having numerous operations, but the progress didn't suit Dr. Blair, but it suited me very well. You have an idea to obtain, that's the point, and you must keep working on that idea until you reach it. There is a certain point about the operation, particularly cleft of the nares; the technic of it has never been settled. I saw Dr. Blair operate on these cases, and he said he hasn't got a satisfactory result with them. So that we can get fair results; particularly if the child be a boy, by perseverance we can really get some remarkable results.

There is no necessity of rushing these cases off to the larger medical centers, because most of them can be operated very successfully at home if one man in the community will do some special work along this line.

DR. F. WALTER CARRUTHERS in response: I thank you very much for your discussion and the kind remarks made. There was only one purpose, primarily, in this paper, and that was to emphasize the point at what time these operations can be performed with hope of success.

I so frequently see these children at the age from two years on up, whose parents have been told that they must wait until that time before an operation should be performed.

The technic does not apply only to this kind of work, but to all kinds of surgical work you are going to perform. Simply get yourself lined up with the method that you, yourself are successful with and stick to it, no matter whether it is Brophy's, John Doe's or whose it is, so far as you can achieve success by the method you are using.

MAXILLARY AND SPHENOIDAL SINUSITIS*

ROBERT CALDWELL, M. D., F. A. C. S.
Little Rock.

The role that sinusitis now plays in the science of medicine has advanced with such rapid strides that it not only parallels the progress made in other older specialties, but is now considered a specialty in itself.

I thought it would be of interest to this society if I would review a series of one hundred and forty cases of maxillary sinusitis and twenty-eight cases of sphenoid sinusitis that have come to operation in our practice within recent months.

Of the one hundred and forty maxillary sinuses operated the greatest number were seeking relief from a cold that would not clear up, about seventy per cent of such cases were an aftermath of influenza. These patients would give a history of a bad cold, maybe with pain in the region of the maxillary sinus and maybe not, generally much discharge from the nose, rarely if any odor; frequently very much below par, no pep or energy, temperature from normal to 99 or 100, but rarely much fever and at times a slight cough. This class comprises what we like to call our acute cases, with which we get most excellent results.

A great number have presented themselves for headache alone, or localized pains over the antrum or temple. A large number complained of numerous symptoms, such as head colds, difficult breathing, nasal discharge, partial to complete loss of smell, general debility, cough, dizziness, marked at times upon changing positions of the body, eacosmia, rheumatic pains and deafness.

Some patients come complaining of an inability to breathe well through the nose, with a history of continual colds, in which cases the septum is straight and the turbinates not hyperplastic and the stopping up of the nose was due to the sinus infection and congestion.

Three cases were children in which the only symptom complained of was a slight fever that

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

had resisted all medication and diagnosis was made from the x-ray findings in a routine thorough examination.

Two cases were of children hard of hearing that had not gotten relief from the removal of tonsils and adenoids, in which cases the drums looked perfectly normal. The nose revealed the usual findings as seen during an acute coryza. Transillumination showed a cloudiness in both maxillary antra. Operation with post-operative treatment resulted in a remarkable improvement in the hearing.

Three were patients complaining of no nasal discomfort, but were seeking relief from a run down condition.

Four cases came in with diagnosis made, as in each case a tooth had been extracted which left an opening into the infected sinus that had resisted irrigations through the tooth socket. In one of these cases a root had remained in the sinus for some time and was removed at time of operation.

The results were good in all of these cases.

One case was referred to our office to complete a general physical examination. The main symptoms were progressive loss of weight, pleuritic pains in the region of the right chest with slight elevation of temperature. Examinations revealed chronic unilateral maxillary sinusitis. No other pathological findings present. This patient was completely relieved by a Canfield operation.

A middle aged man was referred from Booneville, Ark., for examination, to determine if possible, the cause of asthma. His history in brief was: frequent coryza, difficult breathing, frequent irritation in the nasopharyngeal region which caused a great deal of embarrassment due to hawking, spitting or otherwise clearing the throat. He did not complain of headache. Diagnosis of bilateral maxillary sinusitis was made. Operation resulted in an apparent cure.

Recently we were called into consultation by a pediatrician who was making an effort to determine the cause of nephrosis in a child. The diagnosis of unilateral maxillary sinusitis was made. Operation, with general treatment of child as outlined by pediatrician resulted in a cure.

Our records show one case in which a mastoidectomy had been performed with persistence of discharge from the middle ear. A maxillary antrum infection was discovered, operated and marked change immediately resulted. Dr. Dean of Iowa, says that paranasal

sinus infection almost invariably co-exists with otitis media in infants.

To make a diagnosis of maxillary sinusitis often requires no little amount of skill and patience. It depends on a painstaking history, the findings of pus or other pathological changes in the nose, transillumination, x-ray, and needle puncture. Good illumination is very essential. In many cases we find the Leitz light indispensable but of more value in diseases of the posterior cells.

In regard to sphenoid sinus affections three cardinal symptoms have stood out in our practice. First, headache; second, poor vision; third, caecasmia, or bad smell. This headache may be continuous or intermittent, of long standing, as in hyperplastic type, or of short duration and severe in intensity in the acute infective type. The location of the pain may be most anywhere in the head, but more frequently in the temples, parietal region, or at the base of the skull posteriorly. Of the last twenty-eight cases of sphenoiditis operated by us twenty have come for the relief of headache.

The second most frequent symptom complained of, as stated above, was failing vision. This poor vision has been of all degrees from absolute blindness and large scotomas to slight defects with small enlargements of the blind spots. Eight of our cases were caused to seek relief on account of poor vision. None of these cases when they came to our clinic had the least idea that a sinus disease was responsible for their poor vision. Will say that none of these eye cases were operated until a thorough search was made as to other etiological factors. I wish to exempt two cases from the above list of total loss of vision in one eye each, which came on suddenly with severe headache and suppurative sphenoiditis. These were operated immediately, one with 20/70 vision ultimately, and one still under treatment, improving gradually. Further tests in each case failed to find other pathology.

We have had only one case complaining of bad odor. This case had neither headache nor poor vision. When the sphenoid was opened a pronounced odor was very evident. Odor entirely relieved by operation and treatment.

One case of impaired hearing was in a young man who had noticed this impairment for the past year. His symptoms were: Occasional coryza, with pains in the top of his head radiating to the region of the occiput and shoulder. Repeated examinations failed to reveal other

than a slight discoloration of the mucus membranes in the posterior ethmo-sphenoidal region. An x-ray diagnosis of bilateral sphenoiditis was obtained. This we felt gave us permission to open the sphenoids, which we did and at this day hearing has improved considerably.

A very brilliant young man was referred, after numerous thorough examinations, for the relief of desperate headaches from which he had suffered over a long period of time. While he had a high degree of myopia this had been properly corrected. Examination revealed no evident pathology, but a slight discoloration of the mucus membranes in the posterior ethmo-sphenoidal regions with positive x-ray diagnosis of chronic sphenoiditis. After the use of lipiodol he gave us permission to operate. One and one-half years have now elapsed since date of operation and he now suffers only slight occasional headaches and these during attacks of coryza.

The diagnosis of sphenoid sinusitis is a real test of skill. Here our Leitz light is indispensable. Variations in color of the mucus membrane, pus or mucus in the olfactory fissure, scabs, pus or secretions in the rhino-pharynx, enlargement of the blind spots as worked out by the sterio-Campimeter and the x-ray all help. A due consideration of the above, together with the history and symptoms, will determine our mode of procedure.

Now as regards non-surgical treatment we make no distinction whether the case is maxillary, sphenoid or ethmoid sinusitis. Let us not forget to treat the patient and not the disease. Free catharsis, local treatment to the nose and rest in bed will accomplish wonderful results in many cases. Our office treatment consists for the most part in shrinking and cleansing solution, tamponage with various silver salts, aniline dyes, at times suction, displacement, in certain cases as outlined by Proetz (1), vaccines, immunogens, glandular therapy, and injections of phenol in oil. Home treatment must also be considered. In children we usually prescribe drops such as ephedrin sulphate and follow with argyrol, or neosilva. Specific directions as to the proper position in which the head should be placed is very important. In adults very frequently we resort to sprays, but seldom to irrigation. Many acute cases have cleared up under the above procedures, without any surgical intervention what-so-ever. To operate or not to operate; when to operate and when not to operate, will depend upon the judgment of the

physician and the social economic and temperamental position of the patient.

Never forget that syphilis may be responsible for sinusitis and many patients have had all the sinuses opened with no relief to be cured later by specific treatment.

We see much in the literature about washing the maxillary sinuses through the natural opening. When I first began to treat these cases I exhausted the patience of many of my unfortunate patients, all to no avail to them or the operator. I soon learned that I would have to wash these sinuses out some other way. Mikulicz (2), was the first to approach this sinus from underneath the inferior turbinate, and all operations in this area are really just modifications and outgrowths of his discovery. At first a long needle that bears his name was introduced into the sinus, air injected into the needle to see that the point was not in the tissues. Then the sinus was irrigated with sterile water, or salt solution, the pus or secretions being forced out through the natural opening. This procedure had to be repeated many times, in some cases, necessitating a complete cocaineization each time, which was trying indeed to the patient.

I wish to state here that I am in full accord with a statement Hajek (3) makes in his latest text book, where he says, "No air should be injected during puncture of the antrum; air injection may be dangerous, and it is of no advantage to use such a hazardous procedure as a diagnostic means." In a review of the literature he reports several deaths from air embolism, also grave symptoms protean in character, such as blindness, unconsciousness, paralysis, convulsions, tonic contractions and vomiting, all following the injection of air into the maxillary sinus. I have been guilty in years past of using the needle puncture and injecting air and then water as a diagnostic procedure with no bad results; but case reports disastrous to the patients led me long ago, to discontinue that method. We do use the needle puncture in some cases, but never inject the air first. It is very little more painful to the patient to make a window into the sinus underneath the inferior turbinate, then the washing can be done at later treatments practically free of pain. Our diagnostic ability with x-ray, transillumination and all, are of such value today that when we open a maxillary sinus we feel reasonably sure we have pathology.

My method of procedure is to first fracture the inferior turbinate upward; then by means

of a small hollow punch enter the maxillary sinus beneath the inferior turbinate at about the juncture of the anterior and middle third. I then, by means of different biting forceps enlarge this hole, irrigate and introduce a rubber retention catheter for two days. This not only allows for ventilation and drainage, but serves to maintain a more permanent opening through which irrigations to follow are made with ease. The technique of this procedure is simple, requiring only a few minutes for its execution and subjects the patient to a minimum of pain and shock during or after operation. I used to remove the anterior $1/3$ or $1/2$ of the inferior turbinate; but I find the above procedure does as well and saves the function of the turbinate.

Following the above outline of conservative surgery we eliminate infra-orbital neuralgia, devitalization of the teeth, anesthesia of the cheek and prolonged post-operative convalescence.

The above operation gives us excellent results in about 95 per cent of our cases; patients generally clear up in about one or two weeks. If the pus does not subside in three or four weeks I do the radical operation.

There are a certain per cent of old chronic cases with polypi or retained dried secretions that I always operate radically. Out of 140 cases operated in this series, 12 have been operated radically. Of these methods I prefer the preturbinate or Canfield operation. Eight were operated by this method, and four by the Caldwell Luc. I do not care which method is used just so the sinus is inspected and all diseased tissue removed. I feel that I do less traumatism to the inferior orbital nerve with the Canfield operation than the Caldwell Luc. I have frequently done the Canfield operation and sent the patient home in two days with no bad results. I think the two great things in sinus operations are free drainage for pus and perfect ventilation.

The sphenoid operation has been undertaken with fear and trembling by many of us in our early training, and is anything but an easy operation for a novice today. The men who have done more to perfect and make safe the sphenoid operation than all others combined are our own Sluder (4) of St. Louis, and Hajek (3) of Vienna. If one will use the Sluder method of entering the sinus there is very little danger indeed. Once you have opened the sinus use the biting forceps of Hajek to enlarge the opening and good results

may be expected. Ofttimes in suppurative cases we think we have a hole that never would grow up only to find in a few weeks that granulation tissue has almost completely obliterated our opening. These cases often have to be opened two or more times; not so in the hyperplastic types, they rarely have to be operated the second time.

It is not my intention to instil in you the belief that we determine the cause of symptoms or disease and through operation cure them in every case. In a number of cases we only alleviate symptoms and must keep the patient under our observation over a long period of time. The sinuses with which this paper deals, I must admit respond much more readily to surgical treatment than do the others.

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DISCUSSION

DR. R. H. T. MANN, Texarkana: I wish to thank Dr. Caldwell for his very helpful and interesting paper. In acute maxillary sinus infection it is quite a problem whether or not or when to operate. There are some good men who operate very early. Others, with argyrol, think they can even cure chronic cases. Of course, they cannot do that; but we do know that we have some inflammation in every sinus with even a slight cold, and, I think that treatment is justified in certain cases.

I agree with the essayist fully as to drainage of sinuses and also in the radical operations where they are needed.

ASCARIS LUMBRICOIDES INFESTATION WITH EXTREME ANEMIA

H. E. Bardenwerper, Milwaukee (Journal A. M. A., Oct. 6, 1928), says that the presence of Ascaris in children may produce grave results. The blood picture must not be confused with that of pernicious anemia. Failure of hematogenic treatment to produce results should lead to intensified search for the cause of the anemia. Transfusion offers a readily available means of maintaining life in desperate cases till vermifuges may be brought into action. The possible present tendency to overlook worms as serious invaders, should be replaced by empiric treatment with vermifuges.

AN UNUSUAL CASE OF INJURY TO THE GLOTTIS*

HENRY H. RIGHTOR, M. D., HELENA

Patient was an Italian boy of four years. He was in perfect health and about five o'clock in the afternoon was playing in the street with a lemon drop in his mouth.

He laughed out loud and was immediately seized with great dyspnea and cyanosis. His old grandmother ran to him; realizing what had happened she ran her finger as far as she could back into his throat in the hope of getting the candy out. Instead of getting it out she evidently pushed it through the vocal cords into the trachea as he was immediately relieved.

In a half hour, however, his breathing again became very difficult. He was brought to my office in his father's arms. I had no time to examine him as every moment seemed as though it might be his last. He was drenched with sweat, deeply cyanosed and breathing almost impossible.

Without delay I prepared for intubation. Fortunately he did not have a very active pharyngeal reflex and the tube was easily passed into the larynx at the first attempt. He was instantly relieved.

He was taken to his home where in a few hours he developed a cough and a rising temperature. A general practitioner was called in. Examination of the chest revealed widespread moist rales.

Six hours after the insertion of the tube the boy removed it by pulling on the cord which was attached to it. He then breathed easily for about thirty minutes without the tube. His respirations again became very labored. The tube was easily inserted again; relief resulted.

In twelve hours tube was removed and he breathed well for two hours when it had to be replaced, for the third time. It was allowed to remain six hours this time and after its removal there was no more difficulty or obstruction to respiration.

The child, however, had a typical, well-marked case of lobular pneumonia due to the insufflation of the melted lemon drop. This ran its usual course. In ten days the pulse and temperature were normal. Convalescence uneventful.

The case was quite interesting to me on account, first of the immediate development of edema of the glottis, following traumatism by the finger; second that in a few hours there should be widespread lobular pneumonia due to the aspiration of the melted candy.

DISCUSSION

DR. R. H. T. MANN, Texarkana: That is a very interesting case the doctor reported because of the development of the pneumonia and the extraction of the tube by the child. I don't believe it is ever advisable to leave a string attached to the intubation tube and leave the patient, if they can get their hands against this tube and extract it. I believe that the intubation tube should be left in in pneumonia conditions from 24 to 36 hours, when you have inflammation of the glottis or any other inflammation in the larynx. Intubation itself is quite an art, and the doctor was very successful in using this tube. I really think that, if intubation could be practiced more by the members of our profession, in learning how to do it well on lower animals, it would be much better. Dr. Vinsonhaler will probably recall a case, the first case I ever intubated and how I learned to intubate. This child had laryngeal diphtheria. Dr. Garrett at Hope did a tracheotomy. The child had a stenosis of the larynx following the tracheotomy. He didn't know what to do with the child. So Dr. Garrett brought the child to the medical society and we discussed it. I wrote to a friend of mine in New York and asked him what to do and he said to intubate. So with the tube in the trachea and the stenosis above, I must have intubated that child about 60 times and finally, by leaving the tube in for a long time, succeeded in curing it, and reported it back to the next meeting of the society.

Now, as little as you think of that one case, that lesson has been of immense value to me because the intubation of that child and the dilating of that stricture taught me how to introduce the intubation tube quickly, any time, anywhere. And I am sure that I have saved many lives because of the experience gained from that one case. You take a small dog back of the drug store and keep him back there and, if you don't do anything else, intubate him and learn how.

"As my friend's love to me, so mine to my friend may be at all times alike; but we best see it, when we most need it; and that, not because our love is then greater, but our want."

—Arthur Warwick.

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."—Francis Bacon.

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ETIOLOGY, DIAGNOSIS AND TREATMENT OF PARANASAL SINUS INFECTION IN CHILDREN*

E. C. MITCHELL, M. D., Memphis, Tenn.

In the child the paranasal sinus is one of the most common foci of infection.

After fifteen years of investigation of this subject I am still of the opinion that not enough attention is being paid to this phase of examination. These cases do not come with symptoms referable to the nasopharyngeal tract. They come to the general practitioner and to the pediatrician for some condition entirely foreign, as loss of appetite, nervousness, failure to gain weight and pyelitis.

Until the epidemic of "flu" in 1917, little or no attention was paid to the sinus as a focus of infection in children. It was generally thought that the sinus was so poorly developed that it had little or no influence on infection.

I think the best introduction to a discussion of this kind would be a consideration of the development of the sinuses.

The ethmoid sinuses are present at birth. At the age of about two years the cells begin to migrate from the ethmoid across to the frontal bone and there start the frontal sinuses. These sinuses develop steadily until puberty, if there is no disease to prevent the migration of cells.

It can be fairly definitely shown at what time of life an infection began by the development of the frontal sinuses. In some instances a complete non-development is shown, or so-called infantile sinuses. This may be bilateral or unilateral. The maxillary sinuses or antra are present at birth. The sphenoids are present at birth and develop until the tenth year. The sinuses with which we are most concerned are the ethmoids, and the maxillary, or antra.

PHYSIOLOGY OF THE PARANASAL SINUSES

The paranasal sinuses together with the lymphoid tissue of this region enter actively into the immunization against infection of the respiratory tract. The lymphoid tissue is composed largely of tonsil and lymphoid tissue of the neck. When one of these factors is destroyed or diseased immunity is lowered and infection results.

ETIOLOGY

Heredity. Quoting from a recent paper of Dr. John J. Shea of Memphis (1) "a tendency toward sinus disease is often the fruit of the family tree." Children of parents who suffer with sinus disease frequently contract this condition very early in life irrespective of contagion, diet or possible environment. We have also noticed that the sinuses assume the same morphology as that of the parent or immediate antecedent whom it resembles in facial appearance. We cannot say, however, that a parent with infantile sinuses will have an offspring showing the same type of sinuses; however, heredity does, undoubtedly influence to a certain extent both development and infection.

BACTERIA

In all probability the bacillus of influenza, or Pfeiffer bacillus is the most important factor in the sinus infection because its natural habitat is in the mucus membrane of the upper and lower respiratory tract. As was stated before, the first big "Flu" epidemic in 1917 was followed by later epidemics in 1918 and 1919. The staphylococcus, streptococcus and pneumococcus are also factors in producing this condition.

IMMUNITY

Sinus condition occurs when the child fails in its fight to immunize against the invasion of the upper respiratory tract by bacteria. One of the factors assisting in the production of immunity is the tonsil. When a tonsil is truly infected it will assist in the production of sinus disease, not so much by the direct extension of infection from the tonsils to the sinuses as by lowering the child's general resistance. But, on the other hand, the healthy tonsil is a barrier against infection and one of the most potent factors in immunity. If the tonsil is unnecessarily removed then the sinuses must take up the work of both the tonsils and sinuses and the child's resistance to infection is lowered. I think it can be clearly stated that the removal of healthy tonsils undoubtedly predisposes to cure sinus infection.

Hypertrophied adenoid assists in the production of sinus infection. The adenoid has no proven function and when hypertrophied should always be removed.

STATE OF NUTRITION AND ENVIRONMENT

In our study sinus infection has proven to be as common in the well-nourished child as

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in the poorly nourished. We have seen fewer cases in our orphanages, dispensaries and charity practice than we have in the well-to-do. The reason for this being that the child in the orphanage is constantly thrown into contact with respiratory diseases; he works up a gradual immunity. The same old axiom that has proven true in the army—"The boy from the city suffers much less from contagion than the one from the country."

HEAT AND VENTILATION

The question has often been asked why we did not have sinus infection years ago. Probably we did and possibly it was unrecognized; but the fact remains that the child in the steam heated home is more prone to sinus infection than the one who lives in the open. Steam heat keeps the mucus membrane congested and provides better soil for bacterial growth.

SEASON

Sinus infection occurs in the months farthest away from the sun's influence or at the time of the year when the child's resistance is lowest; particularly during the months of January, February and March. In the fall sinus infection is prevalent because of the greater number of contagious diseases that occur at the opening of school.

Most of the fevers which occur after exanthemata, particularly after measles, are due to sinus infection.

GEOGRAPHICAL DISTRIBUTION

It is a generally known fact that the Mississippi Valley is acknowledged as containing the largest number of sinus infections; the farther north in the valley, the greater number. The fewest cases are seen at the coast and this type of infection is almost unknown on the southern coast and in California. It is much less frequent in the mountainous districts though we find more of these infections in the mountains than we do on the coast. Many times simply removing a child to the coast will clear up the condition, but unfortunately a return to the former home produces a relapse.

PATHOLOGY

The pathological changes are:

1. Mucus membrane changes.
2. Failure of immunity.
3. Arrest of development.

As this is more of a medical than a surgical discussion we do not consider that a minute discussion of pathology is necessary in this paper.

EXAMINATION

An examination of these patients shows the nares to be filled with a mucopurulent discharge which may be either unilateral or bilateral. The mucus membrane is coated with mucus and the lymphoid tissue is hypertrophied. Transillumination is of little value in the child. Where the condition is bilateral it is of no value; if unilateral it may be of some benefit.

ROENTGENOGRAMS.

One of our most important factors in the examination of these patients is the x-ray. With care and the proper technique even the youngest child may be examined. The greatest difficulty being so often we get a picture of the skull and not the sinus pathology as a result of bad position, or too much penetration. Too heavy and dark a plate does not give sufficient detail. The technique we have used is as follows:

We have adopted the double screen because faster exposures can be made.

The child's nose and chin are allowed to touch the plate and the head is made secure by clamps. The rays are allowed to penetrate; an imaginary line being drawn superior to the ear. The distance between the tube and the head is about eighteen inches. There is a five-inch gap, ten milliamperes, two and one-half seconds. For those children who will not hold still and in which only a flash is necessary the technique is to use a six inch gap, one hundred milliamperes and one-fourth second exposure.

The direct shadow as shown by the roentgenogram does not mean chronic sinus disease, as acute sinusitis will show the same shadow as the chronic. If the condition is less than one month's duration and shows a normal development of the frontal sinuses we should be suspicious that we are dealing with acute sinusitis and should require the patient to come back at weekly intervals for further examination before making a positive diagnosis. If a definite shadow is shown with undeveloped frontal sinuses, either unilateral or bilateral, then we are dealing with a chronic condition.

SYMPTOMATOLOGY

The symptoms directly referable to the sinuses are repeated colds, indefinite fever which may range from barely above normal to quite high, which may be irregular in type and often remits entirely. Perhaps the cause of this irregular form of fever is the fact that it is often influenced by a secondary condition incidental to the sinusitis, as pyelitis and other things of this nature.

Another common symptom is nervousness. These children are nervous, high strung and are hard to examine. They are usually afraid of the instruments and go into tantrums while being looked over. Sometimes this even verges on chorea.

Another symptom of value is the coughing at night; especially if there is much cold air allowed in the room. When the child sleeps in a warm room the coughing improves.

Sneezing in the morning on arising is often observed.

There is a discharge from the nose, either on one or both sides. There is also a post nasal discharge which is usually thick and purulent in type. The lymphoid tissue in the post nasal region is inflamed and brawny.

Conditions caused by sinus infection, but not definitely referable to the nose.

First: The loss of appetite. Often there is a complete anorexia. This is explained by the fact that the child swallows a large amount of mucus. The stomach is constantly kept busy digesting this mucus; hence the secretions are not available for proper digestion.

Second: Poor nutrition and loss in weight. This is explained first by the lack of appetite; the inability to take food. Second, by the fact that infection, no matter where it occurs in the body directly affects the state of nutrition just as the state of nutrition, vice versa, affects infection; so that we have a vicious circle.

Third: By direct extension this infection affects other organs, producing a large number of conditions to which we can ascribe the sinuses as being the primary cause. Chief among these conditions that we have seen are pyelitis, bronchial asthma, nephritis, rheumatic fever, chronic endocarditis, myocarditis, chorea and very many others. Each of these conditions gives its own train of symptoms. In fact the little patient is more often brought in for the secondary trouble and the primary condition is found only by examination.

DIAGNOSIS

The presence of sinus disease is determined only by keeping in mind its importance; by making a roentgenogram of every doubtful case; by consulting with the rhinologist when in doubt.

After the diagnosis of presence of sinusitis is made, then we must be careful as to whether the condition is acute or chronic before determining on treatment. For if the condition is acute, the sinusitis will subside with some local treatment and by raising the resistance of the patient to infection; while the chronic type usually requires drainage.

TREATMENT

If definite sinusitis is present the underlying condition will clear up only when the sinus infection is improved. The sinus condition will clear up only when the child's resistance is raised so that we have two definite factors to deal with. It is the function of the general practitioner or pediatrician to do every thing in his power to raise the resistance of the child to infection. This is accomplished by proper, well balanced diet; by sunlight and cod liver oil. In the summer time the sun's rays exposed directly to the child is all that is necessary. In the winter we must often resort to the ultra violet ray because of our inability to obtain sufficient sunlight. In some of the more severe cases a complete change of climate is all that avails, but as stated before in this paper, often is of temporary value only.

As to the local treatment. This is entirely the function of the rhinologist and will not be gone into in this general paper.

In the chronic case where definite pus is present in the antra, drainage is necessary. This should be complete and thorough. The old saying "Once a sinus, always a sinus," that once started, drainage must be kept up for life, is a fallacy. It is no more true of the sinus than of any other organ. Drainage is as necessary and as rational here as any place else in the body. These cases should be kept under observation over a period of years after a severe infection. An autogenous vaccine made from the washing of the antra probably helps us in raising the resistance to infection in some of our cases, although we are not over-enthusiastic about this method of treatment.

CONCLUSIONS

1. Sinus infection is often found in the child and is more often neglected than any other focus of infection.

2. The reason for this neglect is that the child comes for some other condition not referable to the nasopharynx and unless the diagnostician is on the watch for this type of trouble it will not be referred to the rhinologist for examination. Chronic sinus disease prevents the proper growth of the sinuses and then chronicity results with its train of symptoms.

3. It is possible by a study of the development of the sinuses in the diseased individual to tell at what period of life infection first began.

4. While we do not feel that sinus infection produces all troubles by a large majority, yet we do feel it produces many which are neglected.

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DISCUSSION

DR. R. H. T. MANN, Texarkana: About ten years ago, or a little longer, Dr. Deane of our city began to report a very great number of sinus infections existing in children. The members of our section were amazed at the enormous number of these infections found by Deane in our locality.

About two years ago Mrs. Amy Daniels, Dietitian of Iowa City, came to our meeting in Colorado Springs with some cages of white rats. One-half of them were sneezing and snuffling from colds, and the other half were free from any infection whatever. They were of the same litter of rats, existing under exactly the same conditions, one-half with infections of the respiratory tract and the other half free from these infections. What had happened was that those rats provided with Vitamin A had no infection and those deprived of Vitamin A were all infected, and they were the ones that were snuffling and suffering with bad colds. Dr. Hayden, of Chicago, who had charge of that meeting at the time told me six months or a year later that by depriving dogs of Vitamin A they had actually produced an infection in the sinus.

Now, may it not be a fact that, when a tonsil is removed, it is awfully hard to say whether the tonsil is infected or not, and this child goes on the same diet, an unbalanced diet deprived of Vitamin A, is it not quite a common thing for that child to develop an infection of the sinus?

Now, Dr. Deane has more recently made the statement, that he had not seen a single case, although he had done this original work of sinus infection, existing in a single patient on whom Mrs. Daniels had carried out this diet.

Now, it is a strange thing that a woman in charge of the feeding of the patients in a hospital has come along and proved that infections of the

respiratory tract were largely due to a deficiency of Vitamin A in the food.

DR. L. H. LANIER, Texarkana: The work that Dr. Deane and Dr. Shea have done in trying to ascertain the cause of sinus infection in children, as well as in adults, has been very interesting. We are not quite prepared to believe that depriving a child or any one else of some certain vitamin is altogether responsible for all the cases of sinusitis that we see or cases that are recorded in the hospital research work among children.

I wish to quote a line or two taken from a paper that Dr. Shea wrote about two years ago. He said, "undoubtedly the simple removal of the tonsils and adenoids will correct most of the sinusitis in children. It should at least be included in the treatment." It is presumed, of course, that we would not operate for the removal of healthy tonsils and adenoids.

The control of lymphoid hyperplasia is very interesting and very influential, I think, in the prevention of these cases of sinus infection. We all know that there are children with a lymphatic temperament. Dr. Mitchell has brought that out in his reference to the family tree. Where they have the lymphatic temperament, there does seem to be a predisposition toward sinus infection.

I would like to add that I do not believe that all the etiological factors in the production of sinusitis have yet been ascertained.

Nothing has been said here as to the effect that syphilis might have in the production of sinusitis. In the study of allergy, we know that a great many children and adults, too, for that matter, are susceptible to some certain proteid, and we often get an anaphylaxis. You will see it when some people eat strawberries or bananas, and you often see it in hay fever or asthma cases, often times there is an allergic manifestation in sinus cases.

Of course, when you take up metabolic deficiency, it is undoubtedly true that depriving the children of Vitamin A will have some influence in lowering the resistance, but no one would claim, of course, that the absence of that vitamin in the food would in itself produce sinusitis without the presence of an infection. The specific micro-organisms cannot be evolved from the absence of vitamins alone. You have got to have for the production of micro-organisms heat, moisture, absence of light and the presence of the germ. We must have those things to have an infection in the sinuses. Congestion of the membrane is very important, too. We cannot have sinusitis without we have congestion of membrane. And when we see these cases following influenza, as we so often do, just as we see otitis media following influenza, we are not disposed to believe that it is due to depriving the child of certain vitamins, but we rather think it is due to the extension of the specific micro-organisms into the sinus. You might see this sinusitis in children of wealthy families that have been accustomed to get everything in the world they need in the way of nourishment. That might hold true in any children whose parents are in a position to furnish them with the necessary food. We believe in some such families where those things occur that they have not been deprived of certain vitamins.

I would like to say that I believe in every infection of the nasal mucosa there is more or less extensive involvement of the lining membrane of the sinuses and, like colds affecting the nasal cavity, it may subside without undue symptoms or it may produce the gravest pathological disorders.

DR. K. W. COSGROVE, Little Rock: I would like to ask a question of Dr. Mitchell. In the persons who had the tonsils removed and later developed sinus infection, did not the x-rays in these cases show the presence of infection in the sinus, previous to the removal of the tonsils?

There is one important factor in the drainage of a chronic antrum, which has not been taken up. Dr. Shea, of Memphis, has put in a tube, and I also know that he does as we do; that is, dilate the natural ostium first, the same as in draining off a keg of beer you have to make a hole at the top and bottom. You get better drainage from the maxillary sinus, if you have a hole at the top as well as the bottom.

DR. MITCHELL, in response: It would greatly simplify matters if a certain diet would control sinus infection. We find as much chronic sinusitis in the baby who is carefully fed; in fact, more than we do the institutional baby. While I believe the proper diet, undoubtedly, raises the resistance of the child to infection and am an ardent advocate of proper diet, I do not think we should lose sight of the fact that sinusitis is a direct result of infection and that many other factors than diet play a prominent role.

As to syphilis, I can only repeat what I said in the paper, that we have found that syphilis plays no direct role in the production of chronic sinusitis. Undoubtedly the snuffles seen in the very young infant is an acute sinusitis.

All cases showing symptoms of chronic sinus infection at the time of tonsillectomy were x-rayed. In most instances a shadow was present over the antrum. In many instances the patient improved in a year or two when temporary drainage was established, particularly by the removal of the adenoid; but in most all cases there was a return of the symptoms after two or three years.

Chronic sinusitis does occur in children. It causes many secondary troubles.

Diagnosis of chronic sinusitis is often overlooked.

HEALTH IN THE EDUCATION PLATFORM

The policies of the National Education Association are developed through a committee which presents a statement each year to be passed on by the representative body. The platform for the current year was approved by the representative assembly of the National Education Association at its annual session in Minneapolis, July 6. It is a significant statement, emphasizing the relationship of education to our government, and the importance of parent teacher contacts, of retirement systems and of securing tenure of office, of a live and developing curriculum, of Americanization, and of the control of illiteracy in the adult. To physicians particularly

one section of this platform will mean a great deal. Apparently the National Education Association recognizes that health, hygiene and a knowledge of the structure and function of the human body are fundamental to human happiness. This section of the resolution is quoted herewith in full:

Health and physical education: Health is winning increasing and clearer recognition as the fundamental objective in the entire program of public education. We recognize health education and health service for children as a definite and appropriate function of the public school. This objective should be defined as health of body, health of mind, and health of character. It is a primary function of the school to discover the health assets and health liabilities of the child, to conduct health inspection for the prevention and control of communicable disease, to keep a record of the health and growth of each child as a part of an educational record, to provide a healthful school environment, and to safeguard the life and health of the pupils in promoting all first aid and safety provisions against accident.

The purpose of health education is to bring to bear upon every child in the school the greatest possible number of influences favorable to the inculcation of habits, attitudes, and knowledge desirable for individual and community health.

Physical education should put the major emphasis upon an extensive program of wholesome activities for all pupils, rather than the devotion of the facilities of instruction primarily to the more highly gifted and intensively developed few capable of winning victories and contests.

We indorse all movements in the communities and in the schools of the country for the promotion of physical education and mental health. We believe there is no greater objective in education than the ideal of a sound mind in a sound body.

Such a policy must be an inspiration not only to the teaching profession of the country, but also to the medical profession and particularly to the parents of the millions of children who are sent each day to our schools. What a pity that the adults of our generation could not have had a similar opportunity! The great problem of the present day is to make parents know as much as their children are learning about the human body in health and in disease.—Jour. A. M. A., Oct. 6, 1928.

THE JOURNAL

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the state, changes of location, etc., are requested.

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Editorial

RHEUMATIC HEART DISEASE

A REVIEW BY

S. F. HOGE, M. D., Little Rock

Under this heading Dr. Hugh McCulloch, St. Louis (1) has given us an excellent article which if carefully studied and applied will go far toward diagnosing and correcting this important and serious condition in infancy and adolescence.

Heart disease in its various and varied aspects concerns the whole field of the practice of medicine. The nature of heart disease, the care and relief of those suffering from the disease, its importance as a cause of death are some of the important problems that interest those handling such cases.

Rheumatic heart disease is most frequently a complication or sequel to that poorly defined, yet frequently used term, "rheumatism." Like chronic appendicitis, we are all more or less familiar with the entity, but few understand and appreciate it in its broadest sense. Rheumatic fever may produce pathologic changes not only in the myocardium and the branches of the coronary arteries, but involve the vascular system throughout the entire body. The cardiac lesion may vary from mild endocarditis to serious pan-endocarditis.

This condition is found almost exclusively in adolescence and emphasizes the importance of studying the child thoroughly, for his complaints may be minimized and misleading. The parents are prone to attribute many of the cardiac symptoms to the ordinary conditions incident to growth. In such cases the doctor is the child's protector and must look to the bottom of things lest he, too, be misled. We would again emphasize the importance of this early and careful study since prevention is worth many times apparent cure. Damage once done and tissue destroyed, is most often repaired with scar tissue which is permanent. This leaves the heart more or less handicapped for the rest of life. While the causative agent of this lesion has not been proven to be either, communicable or transmissible, we nevertheless find it more prevalent in urban districts where poverty and over-crowding prevail. It is believed that the specific virus of rheumatic fever should be classed somewhere among the streptococci and the usual site of invasion is the mucous membrane of the upper respira-

tory tract. It passes from there to the secondary foci.

The diagnosis of rheumatic fever is not always easy. Many children complain of painful joints or extremities, and run a temperature, who are never seen by a physician. Others are seen when the heart change is well established. Some again may have light attacks of what we are prone to call "flu" and later develop unmistakable cardiac pathology, or again the primary attack may not leave its stamp of cardiac change, while repeated attacks will develop it clearly. When a patient has an acute illness with fever and migrating arthritis which clears up without leaving a trail of histo-pathology in the joints, he should not hesitate to make a diagnosis of inflammatory rheumatism, whether the heart be involved or not. Many are inclined to look for an infallible laboratory finding, but as yet that has not been reached. The laboratory work done by a competent doctor may fill in the necessary links to weld a diagnosis, but it cannot do it all. Leucocytosis of even a moderate degree, with some anemia, with streptococci on the mucous membrane of the nose or throat, associated with carditis pneumonitis, arthritis, subcutaneous nodules and hemorrhagic blotching, the diagnosis is established and it is not necessary to ponder over the orthodox signs so patiently and persistently listed in the average text book or periodical. It is indeed commendatory that the present trend of thought is looking beyond the heart itself for many of the important signs of cardiac disease.

Biologic evidence is not infrequently more convincing of cardiac weakness, or distress, than are the evidences manifested by the heart per se. A brief review of these is instructive and may assist materially in diagnosing the case.

(a) An otherwise unexplained daily variation of temperature of 1.5 degrees F. or more should arouse suspicion of a hidden focus of infection very probably the heart.

(b) The pulse rate (basal) should be below 100 per minute. This should be taken several times per day, if necessary, and not less than one full minute should be counted.

(c) Should very moderate exercise accelerate the rate 30 to 40 beats per minute the heart's reserve is very low.

(d) Should the basal rate fail to return within three minutes rest following exercise, it is laboring under a handicap.

(e) Failure to gain in weight in the normal manner and not explainable by other evident conditions warrants a study of the heart.

(f) The child that fatigues easily, gets dyspneic on exertion, would like to play, but says he is just tired, appetite poor, irritation in the late afternoon and better after his meal and rest, sleeps poorly and rolls and tosses, needs a careful study to eliminate cardiac change.

(g) The total white count should not be extremely high. The differential should not be of the pyogenic variety. The total erythrocyte count is usually decreased. Hemoglobin reading is not markedly lowered.

(h) Only suggestive evidence is to be gained from blood pressure findings.

(i) The size of the heart is of importance when it can be definitely demonstrated, but this is usually possible only in marked states.

(j) Variations in the cardiac cycle are of importance when congenital disturbances have been excluded.

(k) Probably the most important evidence manifested after the primary phase includes, dyspnea, cough, cyanosis, edema, large liver, pulmonary congestion and pleural exudate, pulsating jugulars, albuminuria and swelling of feet.

While the data presented here may seem excessive and unwieldy, let us not forget the fact that we are dealing with the child of the present and the adult of the future, that within our hands may lie the responsibility of a future handicapped citizen or on the other hand a healthy person. If this article serves to take one patient out of the former class and put him into the latter it has been more than worth while.

BIBLIOGRAPHY

1. Hugh McCulloch, Jour. A. M. A., v. 90, p. 2073.

Abstracts

PLAN FOR TRAINING COUNTY HEALTH OFFICERS

The plan of meeting the situation in Tennessee, though still in the experimental stage, is presented by Joseph W. Mountin, Nashville, Tenn. (Journal A. M. A., Sept. 8, 1928). The personnel for the average county of 25,000 population consists of a medical health officer, a public health nurse, a sanitary officer and a clerk, all giving full time to the work of the

department. In counties smaller than the average, one or more of the nonmedical workers may be omitted, and in larger counties the organization may be expanded by the employment of additional workers belonging to any of the professional classes mentioned. This organization, inadequate though it may be, is expected to meet the public health needs of the area. Sanitation, control of communicable diseases, including tuberculosis and venereal diseases, maternal and child hygiene, and popular health instruction, comprise activities common to all organized health departments; but in many counties a program is required for industrial hygiene and for such diseases as malaria, hookworm and trachoma, together with other public health problems of local importance. Most county health officers are recruited from among recent graduates in medicine and practicing physicians. They should be given systematic instruction which will prepare them for their new field. There is a need for short courses which will provide this instruction. Training is essentially a function of educational institutions, but local health organizations must co-operate by providing the necessary field experience. Such a program has been developed by the department of preventive medicine of Vanderbilt University School of Medicine and the Tennessee State Department of Public Health.

TREATMENT OF ESSENTIAL HYPERTENSION

Herman O. Mosenthal, New York (Journal A. M. A., Sept. 8, 1928), emphasizes the point that the characteristic blood pressure of any individual may be higher than the average. It may be just as difficult to distinguish between the normal and essential hypertension here as it is to decide in a very tall person whether an acromegaly exists or not. He says that every instance of elevated blood pressure, however slight, should be observed every few months; active treatment need not be instituted until certain levels are reached or secondary symptoms develop. It has been frequently accentuated that the diastolic values are of much the greater importance, as they represent the constant resistance which the heart is forced to overcome and the persistent strain which the arteries must withstand. The importance of these effects to the white race may be gathered from a recent contribution by Fahr, in which he shows that 23 per cent of all deaths in persons over 50 years of age

and older is the result of hypertension. Specific cures there are none. The treatment of so-called intestinal intoxication, the low protein diets, drugs of various sorts, a number of serums, the restriction of sodium chloride, the loss of weight in the obese, all have proved to be of no value in this regard. The best available means at the present moment to reduce the blood pressure in essential hypertension is to obtain nervous relaxation in the patient. Occupation, home life, social obligations and many other factors must be studied and their rough corners rounded off. A good routine of relaxation is one or two hours' rest after lunch and at least eight hours in bed at night. In severe cases, one day a week in bed may be recommended. At times, more or less prolonged rest in bed may be of value. The relation of diet to hypertension has been under scrutiny for many years, until today it almost seems as though fairly definite rules could be formulated in regard to it. The most important dietary restrictions are those in relation to the fats and carbohydrates. These foods are the main sources of obesity, which, in turn, according to Fisk, was accompanied by an increase in blood pressure in 78 per cent of persons who were 20 per cent or more overweight. Since the greatest danger to the hypertensive patient is cardiac failure, it is clear that obesity must be done away with at all hazards under the circumstances and, when indicated, a restriction of the carbohydrates and fats, an antiobesity diet, is distinctly in order. All forms of protein, whether from fish, red meat or white, eggs or any other source, are permissible in the usual amounts.

ORGANIZED MEDICINE AND INDIVIDUAL HEALTH AND MEDICAL GUIDANCE

The public is willing to accept and indeed actively desires protection against quackery and fraud. The public seeks direction to safe and helpful medical and health services and facilities. Thousands want this guidance and know that they need it. Thousands raise such questions with numerous agencies by correspondence and are wisely though very inadequately in the great majority of cases told to "See the Doctor." The answer is not enough. Donald B. Armstrong, New York (Journal A. M. A., Sept. 1, 1928), says that the problem can never be handled on a national basis or by correspondence. What is vitally needed is a local information service and a medical

guidance bureau to which persons may be advised to turn for impartial, unprejudiced, scientific and sympathetic personal guidance. If this service is to be given locally, should it be the work of the health department, of voluntary agencies or of local medical societies? Perhaps all need to participate, but in Armstrong's opinion it would appear essentially to be the obligation of the local organized medical unit, for it involves in a sense rationally and intelligently putting its own house in order. Medical organizations seem to be faced with three possibilities, a choice accentuated by the public demand for guidance; definite State control, with a more or less compulsory degree of public service in this field. Semi-public provision through salaried medical service by means of semi-public pay or free clinic facilities. The incorporation of health and medical guidance into the routine practice of medicine, under the auspices of private medical organizations. The accomplishment of this service must be approached along three principal lines: 1. It is necessary to get physicians in increasing numbers ready to practice private preventive medicine and teach personal hygiene. This medical educational work is an obligation which rests primarily on medical schools, medical societies and similar professional organizations. 2. It is important to have the public more fully aware of its needs in this field, and of the competence and willingness of orthodox medicine to meet those needs about which it is already conscious. 3. It is necessary to establish a local machinery which will purposely and usefully associate service with need. Such a bureau would be made known to the public through dignified publicity. It would arrange for individuals to see competent physicians. It would keep patients out of the hands of quacks and frauds. It would facilitate a wise choice of medical counsel from approved lists of physicians or specialists endorsed by the county society on a functional and geographic basis. The service must be more than a gesture, more than purely informational—it must be real personal guidance.

Of recreation there is none
 So free as Fishing is alone;
 All other pastimes do no less
 Than mind and body both possess:
 My hand alone my work can do,
 So I can fish and study too.

Izaak Walton.

Personal and News Items

Dr. J. T. Palmer of Pine Bluff has been appointed physician of the Arkansas Boys Industrial School at Pine Bluff.

Dr. F. Walter Carruthers of Little Rock read a paper on "Physical Therapy as After Treatment in Orthopedic Practice," at the recent meeting of the Clinical Congress of Physical Therapy and American College of Physical Therapy held in the Stevens Hotel, Chicago.

FORT SMITH PHYSICIANS ENTERTAIN

One of the most attractive meetings ever held in the State, with the exception of the State Society meetings, was held September 19, 1928, at Fort Smith, commemorating the twenty-fifth and fifty-fourth anniversaries, respectively, of the Tenth Councilor District Society and the Sebastian County Society.

More than one hundred physicians, including about seventy-five out of town doctors, attended clinics and luncheons at three local hospitals, and enjoyed programs held at the Goldman Hotel.

The morning hours were devoted to separate clinical programs, held simultaneously at three hospitals, St. John's, St. Edward's and Sparks Memorial, with 13 physicians giving demonstrations. Those taking part in the clinics were:

Dr. C. S. Holt, Dr. C. B. Billingsley, Dr. L. Gardner, Dr. S. D. Bevill, Dr. D. R. Dorente, Dr. H. Moulton, Dr. W. G. Eberle, Dr. S. J. Wolfermann, Dr. J. M. Taylor, Dr. A. F. Hoge, Dr. A. A. Blair, Dr. M. E. Foster and Dr. I. F. Jones. From thirty to forty physicians were present at each hospital for the clinics.

At noon, buffet luncheons were served at each of the three hospitals.

The afternoon was devoted to a scientific program. The annual banquet of the county society started at the Goldman Hotel at 6:30 o'clock. Dr. George Knappenberger of Kansas City, delivered the principal address, and Dr. James A. Foltz of Fort Smith was toastmaster.

The scientific program follows:

"Congenital Syphilis," Dr. G. C. Dennie, Kansas City.

"Birth Injuries," Dr. Pat Murphey, Little Rock.

"The Heart," Dr. Drow Luten, St. Louis.

The Clinical program follows:

St. John's Hospital: Appendectomy; uterine suspension; oophorectomy; perineal repair; hernia—Dr. C. S. Holt. Rectal anesthesia—Dr. C. B. Billingsley. Tonsillectomies; local—Dr. L. Gardner.

Sparks Memorial Hospital: Surgical Clinic—Dr. S. D. Bevill. Case exhibits; (a) glaucoma, absolute; (b) Unusual injuries to eye globe—Dr. D. R. Dorente. Dry Clinic, keratitis—Dr. H. Moulton. Case exhibits; (a) fracture of elbow joint; (b) failure of rotation of colon; (c) megacolon—Dr. W. G. Eberle. Spleno-myelogenous Leukemia—Dr. S. J. Wolfermann.

St. Edward's Mercy Hospital: Splenectomy—Dr. J. M. Taylor. Surgical Clinic; umbilical hernia; tonsillectomy; hemorrhoidectomy, local. Case exhibit—periosteal sarcoma; spina bifida—Dr. A. F. Hoge. Dry clinic; diabetes—Dr. A. A. Blair. Goiter—Dr. M. E. Foster. Case exhibit, acute pancreatitis—Dr. I. F. Jones.

The committee on arrangements was Dr. W. R. Brooksher, Jr., Chairman; Dr. A. F. Hoge, Dr. Jas. Foltz and Dr. D. W. Goldstein.

Men at some time are masters of their fates;
The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings.

—*Shakespeare.*

Obituary

RICE, CLINTON A.—Dr. C. A. Rice, Rogers, died October 7, 1928. Aged 63. Death was due to heart disease.

Dr. Rice was born in Fayetteville and was one of eleven children, all of whom were reared in Benton County, and are among the most prominent citizens of northwest Arkansas. For many years Dr. Rice was an officer in his local medical society and county health officer. At the time of his death, he was city health officer.

Surviving are his widow; two daughters, Miss Pauline Rice and Mrs. Edward Breedlove and four brothers.

ASHEVILLE MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

Located in the midst of the scenically wonderful southern Appalachian Mountains, and enjoying a superb year-round climate, Asheville, North Carolina, is a delightful place for the annual meeting of the Southern Medical Association, November 12-15, 1928. Asheville's central location, the ample hotel facilities, the superb equipment for outdoor sports, are advantages which have made this Carolina city a very popular center for conventions.

In and near Asheville are many enticing points of interest. The magnificent Biltmore Estate, world famous country home of the George W. Vanderbilt heirs is open to visitors three days of each week. Here are marvelous gardens and miles of landscaped drives reaching a climax of beauty in the chateau-like mansion. The famous Biltmore Homespun Industries, where mountain weavers make woolen cloth by hand, the numerous country clubs, the beautiful homes and estates, the Asheville Scenic Highway, the drive to the summit of Sunset Mountain overlooking the City, are among the attractions of Asheville.

Towering Chimney Rock, perched a thousand feet above the broad expanse of Lake Lure, mighty Mount Mitchell, highest mountain east of the Mississippi River and venerable Mount Pisgah, western landmark of the Asheville plateau, are among the points easily reached by motor. The Pisgah National Forest, a three hundred thousand acre outdoor playground of forested mountains and hurrying trout streams, the Great Smoky Mountains where a National Park is now being established, attract many visitors to this section. The numerous lakes of Western North Carolina, the beautiful Sapphire Country, the hundreds of miles of paved motor roads are other attractions of "The Land of the Sky."

Five excellent golf courses now open for play, tennis courts, facilities for hiking, horseback riding, swimming, motor and sail boating, and archery, amid beautiful surroundings make Asheville a southern center for sports of all kinds. November, the time chosen for the annual meeting, is a month of autumn glories in the mountains and the weather at this season should be bracing and delightful.

Eleven modern hotels and inns offer excellent accommodations and service to convention attendants. The Battery Park, George Vanderbilt, Langren, Asheville Biltmore, Jenkins and Swannanoa Berkley offer the European

plan of service, while Kenilworth Inn, Grove Park Inn, Margo Terrace, The Manor, The Princess Anne are operated on the American plan. Many of these hotels have national and international reputations for the excellence of the service tendered their guests. Two of the country clubs, the Biltmore Forest Country Club and the Asheville Golf and Country Club also entertain visitors who may wish to be situated near good golf courses.

The city has railway connections with all principal cities of the United States and Pullman service is adequate to care for large gatherings. Asheville has also excellent connection by bus lines with many cities in nearby States. Highways radiating from Asheville as a center, connect this city with all of the more important cities of the east. It is an easy and pleasant journey to Asheville by motor, and many physicians attending the Southern Medical Association will doubtless journey to the annual meeting over the splendid roads.

Asheville urges the physicians of Dixie to come and enjoy the delights of their Annual Medical Meeting amid the charms of "The Land of the Sky." A most hearty welcome, the way only Asheville knows how to extend it, and a pleasant and profitable time, is assured all who will come.

Book Reviews

Ophthalmoscopy, Retinoscopy and Refraction—By W. A. Fisher, M. D., F. A. C. S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Second Revised and Enlarged Edition. With 260 Illustrations, Including 48 Colored Plates. Published by F. A. Davis Company, Philadelphia, 1927.

The author, Dr. W. A. Fisher, presents this book with the intention of teaching students and physicians the practical use of ophthalmoscope and retinoscope with easy application of methods of study to the detection of diseases of the interior of the eye, and for the fitting of glasses when they are indicated.

Practical Bacteriology, Blood Work and Animal Parasitology, Including Bacteriological Keys, Zoological Tables and Explanatory Clinical Notes. A Compendium for Internists. By E. R. Stitt, A. B., Ph. G., M. D., Sc. D., LL. D. Eighth Edition, Revised and Enlarged, with 1 Plate and 211 other Illustrations Containing 683 Figures. Published by Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. Price, \$6.00 net.

One can easily account why this practical book has reached its 8th Edition. Part 1, refers to Bacteriology; Part 2, Study of the

Blood; Part 3, Animal Parasitology; Part 4, Clinical Bacteriology and Animal Parasitology of the Various Body Fluids and Organs.

Physical Diagnosis.—By Charles Phillips Emerson, A. B., M. D., Professor of Medicine, Indiana University School of Medicine. 324 illustrations. Published by J. B. Lippincott Company, Philadelphia. Price, \$7.00.

The author of this book says: "Physical diagnosis is, and doubtless will remain, the primary and the fundamental method of diagnosis. Every advance in scientific medicine makes its problems greater, therefore harder. This is our reason for presenting for approval to the medical profession a book which will try to reach the levels of the medicine of today and to train the student to be ready to meet the problems of tomorrow."

Health Supervision and Medical Inspection of Schools.—By Thomas D. Wood, M. D., College Physician, Advisor in Health Education and Professor of Physical Education, Teachers College, Columbia University, and Hugh G. Rowell, M. D., Physician to the Horace Mann Schools, Lecturer and Assistant Physician, Teachers College, Columbia University. Octavo of 637 pages, with 243 illustrations. Published by W. B. Saunders Company, Philadelphia, 1927. Cloth, \$7.50 net.

Few subjects interest the physicians more than Health Supervision. This book gives a program of health service in which school, home and community unite their efforts to insure to every child in school that fullness of health and healthful conditions which are favorable to the best growth, development, and education of which the child is capable. We recommend this book as a guide for the activities in this line of the Woman's Auxiliary.

Principles of Sanitation.—A Practical Handbook for Public Health Workers. By C. H. Kibbey, Director of Sanitation, Tennessee Coal, Iron and Railroad Company, Birmingham, Ala. With 34 Illustrations, including 5 Color Plates. Published by F. A. Davis Company, Philadelphia, 1927. Price, \$3.50.

This book furnishes a course of reading that should be very interesting and instructive to Sanitary Inspectors and Health Officers.

The Contents are divided into five sections: Number One, Diseases Spread Through Discharges from the Intestinal Tract; Two, Diseases Spread Largely or Entirely Through Secretions from the Mouth and Nose. The Respiratory Infections; Three, Modern Methods of Rural Sanitation; Four, An Analysis of Food in its Relation to Disease; Five, A Study of the Prevention of Occupational Diseases.

An Introductory Course in Ophthalmic Optics.—By Alfred Cowan, M. D., Assistant Professor of Ophthalmology, in the Graduate School of Medicine, University of Pennsylvania. With 121 illustrations, many in colors. Published by F. A. Davis Company, Philadelphia. 1927. Price, \$3.50.

This book is the outgrowth of the author's notes used in combined lecture and laboratory course in the Graduate School of Medicine of the University of Pennsylvania. It describes the reflection and refraction at plane and spherical surfaces, lenses, dioptric system of the eye, myopia, hyperopia, astigmatism, accommodation, diffused images, and the ophthalmoscope.

WANTED—Location to practice medicine where there is a good school and the services of an experienced physician is needed. Would consider trading for a small drug store. Address: J. S. C., in care of Journal, Arkansas Medical Society, 814 Boyle Bldg., Little Rock, Arkansas.

WANTED: A good doctor to share office with view of taking over entire practice in few months. This is an ideal location and money can be made from the start. None but men from class A school will be considered. Address all replies to H. C., in care Arkansas Medical Journal, 814 Boyle Building, Little Rock.



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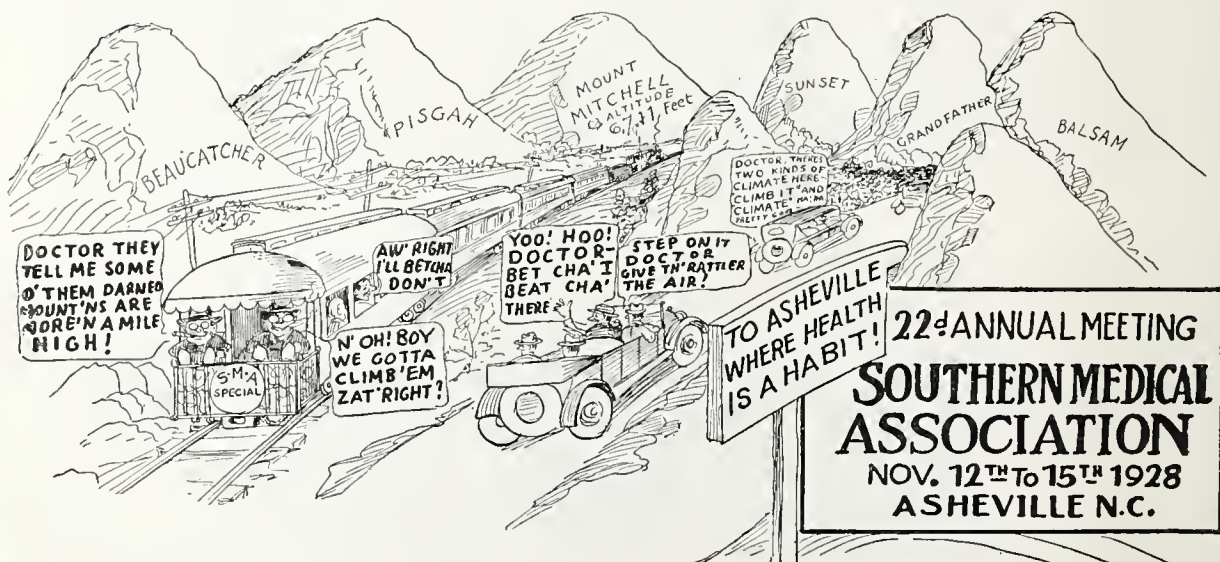
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THE TREATMENT OF ACUTE RETENTION OF URINE IN THE MALE*

J. W. BUTTS, B. Sc. M. D., Helena

The usual causes of acute retention in the male, as seen by the general practitioner, are:

- (1) Acute inflammation of the urethra or prostate.
- (2) Hypertrophy of the prostate.
- (3) Stricture.

The cardinal principles which apply to all of these cases are gentleness, local anesthesia, and asepsis. In practice these may be carried out as follows:

When a patient comes in ascertain as quickly as possible the history of the case, have him lie down on the examining table, palpate the abdomen and the genitalia, make a rectal examination, and if he is in shock give him a hypodermic of atropine and morphine. Wash out the urethra with a warm boric acid solution or a weak mercuriochrome solution. Do not use mercuriochrome because it is incompatible with novocain and the color sometimes obscures urethral bleeding. Inject about a dram of 3 per cent novocain in the urethra and hold it for ten minutes by means of the Walther clamp. Wash the glans and the penis with soap and water followed by a cyanide or bichloride of mercury solution. Lay over the penis a large towel with a hole cut in the center. If the towel is not sterile soak it in the mercury solution. Sterilize your hands or wear sterile gloves. The instruments, of course, are sterile. For a lubricant I prefer glycerine or sterile vaseline.

Very often in the acute inflammatory conditions simply the anesthesia of the urethra allows the patient to urinate voluntarily. If this does not occur try to introduce a small soft catheter; empty the bladder completely

and instill 4-6 drams of warm 20 per cent argyrol. If a soft rubber catheter does not pass, a number 10 or 12 woven silk catheter will usually succeed. If this fails it may be necessary to resort to the whip catheter. Sometimes when a large acutely inflamed prostate is encountered one may make the gentlest pressure on it, express a large amount of pus, and relieve the retention in that way.

The question of acute retention in hypertrophy of the prostate is a most serious thing. These men are old and are potential, if not actual, pyelonephritics. The utmost gentleness and cleanliness are demanded. All of these cases should be hospitalized, but unfortunately, most of them cannot. If a case can be hospitalized my personal preference is to introduce a number 6 ureteral catheter into the bladder, fasten it in and let it drain. I have done this in several cases and have yet to see any bad results follow this method of decompression. If it is not possible to put the patient in a hospital try to pass first a soft rubber catheter. If this fails try the flat bicoude curve woven silk catheter. If this fails, next try the whip catheter, which usually succeeds. After the bladder is emptied refill it with boric acid solution to the amount of $\frac{3}{4}$ of the amount of urine withdrawn. If all of these methods fail one should try the indwelling ureteral catheter. At times it is necessary to do a suprapubic cystotomy and leave a Pezzer catheter in the bladder. This is only rarely necessary. I believe that whalebone filiform, metal catheters and sounds are absolutely never indicated. I may be wrong in this belief and I have no quarrel with the man who says he uses them effectively.

Last, and probably most frequent of all the causes of acute retention, are organic strictures. These are the hard cases. I have no brief for the man who uses, or attempts to use, rapid dilatation. It only causes needless trouble. First, try the whip catheter, holding the penis on the stretch at right angles to the body, try to manipulate the fili-

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

form through the stricture. If this is successful, let it alone for a few minutes then pass catheter on into the bladder, withdraw the urine and let the catheter remain in place for thirty minutes or more. The patient frequently goes to sleep on the table. If the whip catheter fails try a number 6 olivary tip ureteral catheter. If that fails try the old method of packing the urethra with whalebone filiforms and attempt to insinuate one of these through the stricture. If this succeeds tie it in for a period of twenty-four hours and when the patient returns next day it is fairly easy to pass a small size woven silk catheter through the stricture. If all of these methods fail, open the bladder and do a retrograde catheterization. Be sure not to traumatize your patient too much in the futile attempt to get through the stricture.

There is nothing original about this paper. However, it may serve to remind some of us of well known principles which we may have forgotten. Above all, be gentle in all your intra-urethral manipulations.

DISCUSSION

DR. H. W. E. WALTHER, New Orleans: Dr. Butts fully covered his subject but I would like to stress the use of this whip catheter. I would like to re-emphasize what he said about the introduction of steel instruments into the urethra. I think they should be relegated to the scrap heap. These other instruments have not the life of a steel instrument; but, when we have the consideration of our patients at heart, we should use non-traumatizing, non-injurious instruments in preference to steel. This catheter with the filiform tip will go through many urethral strictures and will pass over many a prostatic tumor, when you can not get in by any other means, and it will save the doctor a great deal of work and save the patient a great deal of suffering.

We owe Dr. Butts a vote of thanks for bringing this little simple matter before us, because it is all-important in our practice. Any individual may some day develop an acute retention and we want to know that there is something in the world besides a steel catheter, which can not fit every man's urethra. A silk, pliable instrument will find its way through the various courses of the individual without producing any traumatism, and it is the instrument that should be used.

Every urologist has had the experience of having an acute retention sent to him 100 miles or 200 miles from home to have a whip catheter passed, when two dollars invested by the physician in his home town would have saved all this undue trouble and undue expense.

I don't feel that a specialist should come before a medical group and toot his own horn, but a piece of missionary work like Dr. Butts has brought before you today, is very, very timely.

DR. H. F. H. JONES, Little Rock: Like Dr. Walther, I feel that Dr. Butts has covered the subject most thoroughly. As a piece of missionary work, I think it is highly meritorious.

So many times we see these retention cases in which there is organic urethral stricture complicating the prostatism and they have been very badly handled, in that catheterization has been attempted which has been unsuccessful, and these cases are in profound shock. Uremia has developed, and naturally, we are handicapped very materially at the start. Then, of course, it is necessary to do a supra pubic cystotomy at once, in order to establish drainage.

Dr. Butts mentioned gradual bladder decompression. This, we all know, is essential if we wish to save our patient severe shock and probably death.

In these retention cases, due to organic urethral stricture alone, if they have been traumatized very severely, I think they are best handled by doing an external urethrotomy.

DR. G. W. REAGAN, Little Rock: Dr. Butts certainly presented us a very timely paper. It is something that all the general practitioners, I believe, come in contact with.

There is one thing I would like to mention, that has been condemned a great deal that I think ought not to be condemned so much, and that is the use of cocaine. The doctor says to inject novocaine. I would like to call attention to the fact that novocaine is not a good local agent. We never use novocaine in the eye, if the eye, ear, nose and throat man does an operation on the eye. Why can't we use cocaine in the urethra as well as in the eye? I know it has been considered very dangerous to use it in the urethra, but I use it and there is a lot of other men that do. There is no harm if you don't use over one-half per cent solution of cocaine in the urethra; you will have no trouble with it. I have never had any trouble with it whatever. I often use cocaine in my cystoscopic examinations and I don't have very much complaint from my patients. I think cocaine is much to be preferred and you get much better anesthesia from cocaine than you will from novocaine.

We have acute prostatitis quite frequently in young men. That was a thing that wasn't touched on quite enough. This, of course, is usually a complication of gonorrhea, and the patient has to be catheterized. We don't like to do a suprapubic cystotomy on a young man on account of acute prostatitis. Usually, if these patients are put to bed, on a light diet, with good saline laxatives and given hot sitz baths—and usually, when we have to catheterize them, catheterize them with a very small catheter—in 24 to 48 hours these patients will be urinating all right. Keep up your sitz baths, and your prostate will be in good shape pretty soon.

I am using a silk lead-loaded catheter for dilating strictures in the urethra. It is small at one end. I usually get about No. 6 at one end and which gradually increases in size until it is about No. 11 at the other end. That is the smallest one, and then I have different sizes. These lead-loaded catheters are heavy, and you put it in ice cold water and you get it rather stiff and it will follow the contour of the urethra and, if you can't get through with any other kind of catheter, I have nearly always been able to get through with the lead-loaded catheter. I certainly have had better success with it than I have with the silk catheter.

DR. BUTTS, in response: I appreciate this discussion, and enjoyed it a great deal. In reply to Dr. Reagan regarding the use of cocaine in the urethra, I am just afraid of it. You don't need much anesthesia anyway in these acute retention

cases. I really believe you get a better anesthetic effect from a three per cent novocaine locally, if you leave it in ten minutes. But I have seen two patients that were so near death from cocaine that it just looked like they were going to die anyhow, and I don't want that to happen to me. I am scared of it. Gentlemen, in the small towns, if you kill one you are gone. (Laughter.)

RENAL INFECTIONS COMPLICATING PREGNANCY*

H. FAY H. JONES, M. D., Little Rock

Pyelitis and Pyelonephritis occur frequently during pregnancy and the puerperium and are very troublesome both to the obstetrician and to the general practitioner doing obstetrics. Since it concerns both the patient and the fetus, and may influence an unfavorable course, pyelitis occurring during pregnancy assumes a more serious aspect than does a simple case of pyelitis. Early diagnosis and treatment will not only save the patient much suffering, but, in many instances, save the fetus. According to De Lee (1) two-thirds of the women dying during pregnancy have or have had pyelitis at some time. When we consider the number of cases occurring during infancy and childhood, it is evident that this figure is a conservative estimate.

Etiology: Many observers believe that pregnancy is not the cause of pyelitis, but is a predisposing factor. They are of the opinion that pregnancy lights up an old latent infection. It has been definitely shown that the main factor in the production of renal infection is urinary stasis, which is caused by the pressure of the gravid uterus on the ureters. The pressure results in a hydronephrosis in practically every case. The fact that the fundus of the uterus and the fetal head usually lie on the right side of the abdomen accounts for the greater frequency of right sided pyelitis. De Lee, on the other hand, is of the opinion that pressure of the uterus is never responsible for this condition. He believes, with some others, that kinking, stretching, torsion and stricture of the ureters are the principal factors. Pyelography and ureterography do not always support this view. However, we frequently find stricture in these cases.

There is an abundance of evidence collected from scientific experimentation and clinical study to show that renal infections are primarily hematogenous in origin; namely, that

the infection is supplied from the blood stream. That ascending infections are possible and occur frequently has been accepted by many, notably Kretschmer, (2). Also, there is the possibility of infection by lymphatic extension as has been clearly shown by Franche, (3) and Stahr (4).

Bacteriology: It is commonly believed that the colon bacillus is the chief cause of Pyelitis and Pyelonephritis. Bumpus and Meisser (5) believe that the streptococcus is the infecting organism and that the colon bacillus is a secondary invader which outgrows and usurps the entire field. They also believe that the teeth and tonsils may harbor streptococci which have a selective action on the urinary tract.

If Bumpus and Meisser are correct in this assumption, it would seem that the incidence of streptococci and staphylococcus pyelitis would be more frequent. P. M. Patton of the Clinical Laboratory in London states that the reason the organisms are not found more often in the blood is that cultures are not made at the proper time. He believes that the organisms are present in the bloodstream only just before a rigor, during or soon after a chill.

Symptoms: Pyelitis and Pyelonephritis of pregnancy usually begin with frequent burning urination. Many patients do not report this, thinking probably it is but natural to have such symptoms during or following childbirth, when in reality it is due to a bacteriuria.

If treatment is begun at this time, usually a violent attack is prevented; but if allowed to continue, in a short time the patient develops a pain in the lumbar region, the kidney is tender on palpation, the patient has a rigor and a rise of temperature from 99.5 to 104 or 105. Very few cases have a rise of temperature without first having a chill. The chill is followed by a remission and profuse sweats. The temperature curve is that of infection. The rise may occur only once or at irregular intervals.

The blood picture varies, in some cases the leucocyte count being 7,000 to 8,000, with a normal or slight increase in the polynuclears. However, most of them show a marked leucocytosis and high polynuclear count. Early in these cases quite frequently the urine will be clear or show only a few pus cells, but later, within 48 hours, the microscopic field is crowded with pus cells. The diagnosis is usually very easily made, especially with the aid

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of the cystoscope. It is not unusual to see patients in whom all objective and subjective symptoms have disappeared during confinement, to recur during a subsequent pregnancy.

Diagnosis: Every ease of pregnancy should be looked upon in one sense as a urologic ease. As such, a careful history is necessary. In formation relative to the possibility of focal infection, poor gastro-intestinal function and urinary symptoms, should be especially solicited. A physical examination should be complete, especial attention being paid to the teeth, tonsils and sinuses, which are the big three in foetal infection.

The time for making a diagnosis of the urologic condition in a case of pregnancy is when the history or physical examination of the patient reveals evidence of previous or present trouble and not, as is usual, when the patient is acutely ill. Unfortunately most of the eases are acutely ill before we see them, then it is merely a question of relieving the severe symptoms and carrying the patient through the pregnancy with as little interference as possible. If these patients are seen when the first symptoms appear, which is usually between the third and seventh month, proper treatment would in many cases prevent further trouble.

Another type of renal infection encountered frequently during pregnancy and the puerperium is tuberculosis, which results from a pulmonary focus that has become active. With the additional work thrown on the kidney during pregnancy, and with the lowered resistance of the patient, the kidneys are more susceptible to infection.

When Pyelitis occurs during the puerperium, it is often mistaken for puerperal sepsis. It may usually be differentiated from the latter by examination of the urine following ureteral catheterization. Occasionally however, puerperal sepsis is mistaken for pyelitis. Although in many cases infection of the urinary tract existed prior to the puerperium, a large number occur for the first time during this period. Pyelitis during the puerperium should receive the same treatment as that occurring at any other time.

Unfortunately the urologist does not see many of these cases early. As a rule they have been ill from several days to a few weeks, during which time they have been treated for "Flu," malaria and various other diseases. Because of right sided pain, chills, fever and a high leucocyte count a diagnosis of appen-

dieitis is sometimes made. This error, of course can easily be avoided by careful urinary analysis, for undoubtedly a large number of eases of so-called appendicitis during pregnancy are in reality cases of pyelitis.

Cystoscopic examination reveals the fact that the bladder sustains more or less injury during every labor; residual urine is frequently present, and infection extending to the kidney pelvis readily occurs. A sterilely catheterized specimen of urine should be taken as soon as the diagnosis of pregnancy is made. If bacteria or pus are found in such a specimen, not only should a roentgenogram of the urinary tract be made but a cystoscopic examination and a more careful search made for possible foci of infection.

Treatment: The treatment of pyelitis during pregnancy and the puerperium may be divided into two parts. First the medical and secondly the instrumental, or ureteral drainage plan. If the patient is seen early enough medical treatment is usually sufficient to control the infection. We advise the patients to have complete rest in bed and drink large quantities of water. The gastro-intestinal tract should be carefully watched. Good elimination by the bowels at least twice daily is important. Posture is a very valuable adjunct and should be employed as a matter of routine. The knee chest position for three to six 10 minute periods daily permits the uterus to fall forward, thus relieving pressure from the ureters.

Internal treatment consists first of the administration of alkalis; we prefer the use of sodium citrate, giving 30 to 40 grains in a full glass of water four times daily. Sodium bicarbonate is also used frequently, but we find it is not tolerated as well as the sodium citrate. This plan is carried out for a week, at the end of which time the alkalis are discontinued and the patient started on 30 to 40 grains of sodium phosphate and 20 to 40 grains of hexamethylenamin a day. At the end of the second week the sodium acid phosphate and hexamethylenamin are discontinued and the alkalis repeated. This plan of alternating treatment is continued until the patient is relieved. During this time the reaction of the patient's urine is controlled with litmus; enough alkalis are given to render the urine alkaline and enough acids given to render the urine acid to litmus. The greater number of eases of pyelitis of pregnancy can be handled in this simple way.

When the medical management of these cases fails, then we must resort to ureteral catheterization and pelvic lavage. In many cases it becomes necessary to leave the ureteral catheters in situ for continuous drainage. This continuous ureteral catheter drainage method has proved more satisfactory than intermittent catheterization and pelvic lavage. We frequently leave the catheters in for several days, three to five days as a rule. Many patients, however, do not tolerate an indwelling catheter and in these cases it means more frequent cystoscopic treatments. 1 to 2 per cent silver nitrate or 1 per cent mereurochrome are used to lavage the kidney pelvis.

In cases in which there is a hydronephrosis with little or no infection we do not irrigate the kidney pelvis. We merely see that the catheters drain freely, injecting sterile distilled water to open the catheters.

Ureteral catheterization is easily done and can be carried out throughout the pregnancy, even to the last week, without danger to the mother or fetus. The follow up treatment is essential in that, if the infection is not cleared up, there is a possibility of the infection recurring in subsequent pregnancies.

Except in one case, with this plan of treatment we have yet to see it necessary to terminate the pregnancy. This patient had a severe secondary anemia and a rapidly failing heart.

CONCLUSIONS

(1) Pyelitis and pyelonephritis are frequent complications of pregnancy and the puerperium, and occur more often than is generally suspected.

(2) Many of these cases are not correctly diagnosed and therefore improperly treated.

(3) Pyelitis is due in the majority of cases to the colon bacillus.

(4) Most cases of pyelitis of pregnancy can be handled in the conservative way as outlined above.

(5) For those cases that fail to respond and in which the patient's condition is such as to demand more active treatment, ureteral catheter drainage is the most successful as well as the safest form.

(6) Unless there is some other serious complication it is rarely necessary to terminate a pregnancy because of a pyelitis or pyelonephritis.

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DISCUSSION

DR. J. W. BUTTS, Helena: I want to discuss a matter not exactly along this line, the case of a woman who was four months pregnant and, out of a clear sky, began to bleed a great deal from her kidneys. She noticed that her urine was the color of claret and it worried her a great deal. She did not feel badly. She had no elevation of temperature. A routine examination was negative. On cystoscopy we found that the bleeding came from the right kidney. I would just like to show you these pyelograms. Here was a young woman 19 years of age, and she started bleeding. I was afraid possibly here was a tumor that had slipped up on us. The only solution of the problem was to make a bi-lateral pyelogram. I haven't had the broad experience of Dr. Walther and have been a little afraid of it. But with much fear and trembling, I did it. I had no trouble, thank God. We got this picture here, and we felt very much reassured, because there was no filling defect, as we at first anticipated. We dilated this woman with a No. 12 bulb and she went along fine and is now in her last month of pregnancy. I understand she is doing very nicely.

DR. H. W. E. WALTHER, New Orleans: The term pyelitis of pregnancy, I think most of us are willing to concede today, is a misnomer. Renal infections complicating pregnancy is a better term. There are a great many of our pregnant women that present themselves to us during this period of their lives who have had no check-up of the urine prior to the pregnancy. If that were done, many of these women would demonstrate a silent, mild renal infection. So that I believe that most of these so-called pyelites of pregnancy are purely renal flare-ups during this period, due to the rise of the uterus out of the bony pelvis and producing pressure symptoms and, therefore, interfering with the drainage of the kidneys. The mere passage of a catheter and the lavage of that kidney, (sometimes with the immediate removal of the catheter), will do a great deal of good. Probably in some rare instances one treatment will do, particularly if you introduce a Garceau catheter, which straightens out the kink or which irons out the stricture or the angulation, restoring drainage to that side.

I want to commend to your serious consideration a new urinary antiseptic, which I believe worthy of your attention in urinary infections. I refer to the new antiseptic of Merck's, called pyridium. Pyridium can be used by mouth in either an acid or alkaline urine. We give two tablets three times a day. They are supplied in 0.1 gm. They don't dissolve until they reach the intestinal tract and are non-irritating to the stomach. So far in my experience (and I have been very, very conservative about ever getting enthusiastic over any urinary antiseptic), my results have been little short of miraculous. The pus content and the bacterial content is appreciably influenced within 24 hours after the giving of this drug. Of course, urinary antiseptics by mouth will never supplant the physical agents for cleaning up the pathological entities in the ureters, but I believe, with the introduction of pyridium, we

have something very much more tangible as a urinary antiseptic than anything else we have had so far.

DR. J. O. GURNEY, Pine Pluff: I have been forcibly impressed with this, similitude of symposium on urinary drainage, and some very excellent papers have been presented, those which are practical and those which can be used in the beginning by general practitioners. I was glad to hear the urologists say they had a missionary message for our medical society. It is the little things that count after all; the things that we can do in the beginning to relieve our patients means a great deal more, so far as the activities in life and their relationship to human society are concerned, than to wait for the onslaught of radical measures.

I have in my experience of twenty years always been very conservative in the cases of pyelitis of pregnancy and pyelo-nephrosis. There is a time to get busy and do a great deal for the patient. Sometimes we are disappointed in that the patient has a chill, has some disturbance, some nausea and pain in the back, and we put it off on something else rather than take the time as busy medical men to check up on that individual. There are many doctors who become really derelict in their duty on account of the attitude of the patient. They feel that, if the patients are not interested in themselves, they should not insist further on regular check-ups in urination. These individuals are treated, as one of the essayists said, for many different conditions that are altogether foreign to the condition which really exists. Chills and fever with profuse perspiration should be thought of as a case of pyelitis in a pregnant woman until proven otherwise. With the assistance of our laboratory, even though we might be too busy to do the thing ourselves, we can get a check-up on that individual and do a great deal in the beginning. In some of these individuals, if we take the time to get a complete history, we will find out, as Dr. Walther said, that these things have existed since childhood. Some types of urinary disturbances, possibly if we investigate thoroughly, we would find that they were cases of pyelitis when very small children. As we know the female is more particularly susceptible to the colon bacillus infection entering the bladder and ascending the urethra, and thence into the kidney. We are sometimes disappointed when we make a urinary examination to see no pus cells after one of these chills or rigors and pass it up as something else; whereas, 48 hours later, if the urine is examined, it will be loaded down with pus.

I recall an individual who was treated three months for chills and fever at irregular intervals, and this individual had a pyelitis. Frequently it is hard to get the co-operation of the patient, when some doctor comes along and knows better and says to this individual, "O yes, I can cure you without medicine."

I feel we owe a duty to the women who are pregnant to make a regular check-up on them and ascertain if there is any condition in the kidneys which needs attention.

DR. C. S. HOLT, Fort Smith: There is a great deal of difference between the medical society of today and the medical society of yesterday. I sat over there and listened to these dapper urologists that we didn't use to have come up here and speak. Dr. Cooper, Dr. Vinsonhaler and the rest of them used to discuss all the papers, and now they have taken a back seat. The only reason why they have taken that back seat, I think, is that they are just getting too old to come up. I am here

to defend them. No one appreciates these urologists of today more than we older men—and I am getting to be a back number, although I can still get upon the rostrum. They have done, and are still doing, so many things right that we used to do wrong, and we appreciate their work.

I would like to sit and listen longer, but there is just one thought that occurred to me that has not been emphasized, that I feel should have been, and that is the pyelitis with pregnancy and the pyelitis of pregnancy. When you get pyelitis with pregnancy, you have a more or less dangerous condition to deal with. If you get a pyelitis of pregnancy, you have a pyelitis in which the system has formed anti-bodies and the system can cope with that situation along with the help of the urologist.

DR. S. F. HOGE, Little Rock: I think we all agree that we have heard a most excellent symposium. The urologists have stressed some points and probably passed over others. It has been my pleasure or misfortune to pick up sixteen cases of tubercular nephritis in the last eight months. Those patients all happened to be women. They are all going to ask me when I go back what encouragement I have to offer. I would like some help from those present on this problem.

DR. G. W. REAGAN, Little Rock: I would like to say something about Dr. Hoge's question, since he has not directed it to any one particularly. There has been some very interesting work done on this very thing. We used to think that if we had tuberculosis of the kidney we ought to find out which kidney was involved and remove that kidney surgically. It was a surgical condition and, if we didn't remove that kidney, the other kidney would become infected. There has been a great deal of work on this subject by the State Tuberculosis Hospital of Minnesota. They have a very fine staff there and on that staff they have all kinds of specialists. The urological staff has done the greatest work of any place I know of. They assert that lots of these tubercular kidneys will clear up under the regular treatment for tuberculosis. These kidneys don't have to be removed. First, give those kidneys a chance. Put these patients to bed; give them plenty of fresh air and the right kind of food and rest, and most of those kidneys will clear up. Kidneys that have been proven definitely to be tubercular have cleared up, just as other pulmonary conditions have cleared up.

I think the thing the Arkansas Medical Society wants especially is something they can handle themselves. Most of this has been along that line. Dr. Butts' paper has so much that the general practitioner can handle, and Dr. Jones has stressed the medical treatment of pregnancy and the importance of making examinations of the urine and finding out if there is infection there and, if there is infection, to treat it before it does give serious trouble.

One other thing I would like to call special attention to is urotropin in these conditions. There are conditions in which it is specially useful, and they are pyelitis of pregnancy and in an old prostatitis.

"If all the year were playing holidays,
To sport would be as tedious as to work;
But when they seldom come, they wished-for
come,
And nothing pleaseth but rare accidents."
—Shakespeare.

MALARIA*

S. J. McGRAW, M. D., El Dorado

The term malaria is a combination of two Latin words: Mal and aria, meaning bad air and we see at once that it is a misnomer.

It is an infectious non-contagious disease. It may be acute or chronic and is caused by the malaria plasmodia. Its history goes back into tradition beyond the knowledge of man. Impedocles, 500 years B. C., recognized its relation to stagnant or semi-stagnant water and stopped an epidemic by draining some ponds. Hippocrates about the same time divided it into its three types, tertian, quartan and the estivo-autumnal, the types we recognize today.

Malaria perhaps more than any other disease has left its mark upon the early civilization. It appears to have been introduced into Greece from Africa through Grecian soldiers returning from certain conquests in that country and into Rome through the various Greco-Roman conquests.

The decline and fall of the Grecian and Roman civilizations no doubt were much influenced by the continued debilitating and devitalizing influence of malaria upon those races.

The mosquito and malaria have long been associated. In certain counties of Africa both are expressed by the same word. Long before Christ it was a saying among peasants in malarial countries that "where there are many mosquitoes there is much fever" and they resorted to the common practice of smoking the mosquitoes out of their cabins at night. Another prophylactic measure in those days was for the family to drive the sheep into the cabin for a while and allow the pests to fill themselves on the sheep after which they manifested little disposition to bite the people.

Rome became a hot bed of malaria. It was surrounded by the Pontine marshes and the people thought the condition due to bad air caused by those marshes; so with characteristic Roman energy they drained the marshes and improved the conditions greatly. What they really did was to destroy the breeding places of the mosquitoes thereby improving their sanitary conditions with reference to malaria.

"The malaria parasite is a protozoon of the class sporozoa of the order hemosporidia, of the genus plasmodia."

Malaria is due to the development in the body of a protozoon which is inoculated by the bite of the Anopheles mosquito and by the female exclusively.

This protozoon assumes three different and perhaps distinct types.

1. The plasmodium vivax, the agent of benign tertian.

2. The plasmodium malaria, the agent of quartan fever.

3. The plasmodium falciparum, the agent of tropical fever, Estivo-autumnal fever or pernicious malaria.

These three fairly distinct species have similar biological and pathological characteristics and are affected by the same therapeutic agent, quinine.

Malaria is inoculated into man by the bite of the female Anopheles, which must itself become infected at some previous time by sucking the blood of some person infected with malaria.

It may be produced artificially by withdrawing the blood of a malarial patient while in the febrile stage and injecting it subcutaneously into a non-infected person. After a lapse from five or twenty-five days this person will develop active malaria of the same type as the person from whom the infection was transmitted.

Concerning the progress and development of the malarial organisms in the blood of man its transition from one stage to another until it culminates, disintegrates and begins its cycle all over again, is a very confusing theory about which more has been written than known; but suffice to say it is very evident to us just as it was to those people 500 years before Christ, that there is a very close relationship between mosquitoes and malaria. "Many mosquitoes means much malaria, and no mosquitoes mean no malaria."

In order to obtain a fairly correct knowledge of the parasite in its evolution in the blood we may recite the order in which it progresses in man.

1. Schizont.
2. Ameboid body.
3. Rosette body.
4. Gametes.

For purpose of treatment the parasite in its first three evolutions that of schizont, ameboid body, and rosette body, are easily de-

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

stroyed by quinine; but when it reaches the stage of gamete formation the gamete is resistant to quinine, and that explains our cases of chronic malaria, which have their relapses and which sap patients' strength regardless of our quinine. So it is important, very important, that every case of malaria be treated early and thoroughly so as to destroy all parasites before they reach the stage of gametes; otherwise the patient may have relapsing malaria or chronic latent malaria for months or even years. It is the gamete that perpetuates malaria, because it is almost a quinine fast parasite.

The gamete possesses a kind of retrograde development itself a product of the rosette body, yet it has power by division and multiplication of its nucleus to form rosette bodies and by disintegration set forth a new army of young parasites to invade new blood cells.

The gamete is the highest order of malaria organism in man; but, if taken into the stomach of the mosquito, will undergo several more evolutions and in the end produce malaria. So the gamete means malaria up or down, and that explains chronicity of the disease in patients who have not been thoroughly treated before the disease reaches this stage.

Malaria is a widespread disease. It has its greatest intensity in the tropics and decreases in severity as it approaches the poles. The torrid and temperate zones are most affected. It is almost extinct in some places now which were once hot beds, owing to the agricultural and commercial development of the country. The drainage in marshy districts and the cutting down of the forests have rendered these places unfit for the propagation and harboring of the mosquito.

The building of the Panama Canal is the greatest triumph of sanitary intelligence the world has ever known. France lost one hundred million dollars and ten thousand men trying to build the canal, and failed because she did not know that malaria was a mosquito-borne disease.

Now that we know the mosquito to be the only means of transmission we may work with greater confidence towards the extinction of the disease. The destruction of the mosquito is the prime prophylactic measure. The most effective means of doing this is what we want. It has been suggested to poison his habitat by means of sprays used by airplanes; this seems far-fetched. The measures in common use are drainage, cutting weeds, oiling ponds,

filling water holes and such other things as will render the community unfit for the mosquito to live in, thereby destroying him. This is our first and strongest line of defense. If we succeed we are safe; if we fail, it becomes necessary for us to fall back to our second line of defense. Knowing that the anopheles is a night mosquito and works but little during the day, we make this knowledge practical by trying to protect ourselves from her at night. This we do by screens, mosquito bars and the swat. This line of defense, though weaker than the first, renders us wonderful protection and no doubt many a night we lie with our heads upon a pillow while just a few inches away on the screen outside sits the treacherous mosquito, her glands stuffed with malaria plasmodia and eager to inject it into our blood. Yes, this is a very good line of defense; but, unfortunately, sometimes the enemy breaks through and being asleep and unprepared to protect ourselves tragedy ensues quick and fast.

It must have been this particular tragic moment that inspired Bob Taylor, the great Tennessee orator, when he delivered his famous address upon the Arkansas Mosquito, to write the first paragraph in song. If my memory serves me right it ran like this:

"Buzz, buzz, buzz, no bars around the bed.

Buzz, buzz, buzz, no hair upon the head.

Buzz, buzz, buzz, I'll paint old Baldie red.

There'll be a hot time in the old town to-night, my baby!"

So having failed to vanquish the enemy in the field our first line, and having failed to protect ourselves from him our second line, and having been wounded by him, it now becomes necessary for us to retreat again to our third and last line of defense. This consists in treating the disease after it has been contracted.

Malaria is a kind of tripod affair, it goes by threes. It is conveyed by three species of mosquitos: 1. *Anopheles Quadrimaculatus*. 2. *A. punctipennis*. 3. *A. crucians*. There are three types of the disease, Tertian, Quartan and estivo autumnal. Three types of plasmodia, *P. Vivax*; *P. Malaria*; *P. Falciparum*. Three stages of a malaria paroxysm. The cold, the hot and the sweating stage.

Concerning the pathology of malaria much might be said, but suffice to say it being a blood destroying disease, sooner or later we would expect anemia of varying intensity.

The spleen may become enlarged and indurated to such an extent as to require its removal; blood pigment or coloring matter is set free and deposited beneath the skin, hence the swarthy, icteric color. The books tell us of abscesses of the liver. This I have never seen; fatigue and general debility are a natural sequence. Malaria in its chronic form not only incapacitates its victim for work, but renders him more susceptible to other diseases.

The treatment of malaria in great measure resolves itself into the varied and energetic use of quinine. For the discovery of this wonderful drug the world owes a lasting debt of gratitude to a Spanish noblewoman, who was herself cured of an infection of malaria by drinking a decoction made from the bark of a certain tree. After her recovery she collected a quantity of this bark and sent it home to Spain where it was used with equally good results. The lady was the Countess of Cinchon and the drug was called cinchona. How long it had been used before that time we do not know, but that seems to have been its introduction into civilization. So it is cinchona in its various preparations that is our remedy par excellence for malaria. If not a specific, at least a near specific as much so perhaps as any drug is a specific.

The *p. vivax* responds most easily to quinine. *P. Malaria* not so easily. *P. falciparum* is most resistant.

The simple vegetative forms of plasmodia are easily destroyed by quinine, but after reaching the stage of gamete formation they are very resistant. These gametes, when taken into the stomach of the mosquito, will undergo still further sexual development and in the end produce malaria. So any form of treatment which has for its object eradication of gametes must be thorough. Some authors think to keep the blood alkalized with fruit juices, orange, grape fruit and pineapple renders the quinine more effective. Our own C. C. Bass thinks that ten grains of quinine a day for sixty days will sterilize almost any case of malaria. All authors do not agree with him. It would appear that the intravenous use of quinine would be the ideal procedure. It is easy and gets the drug right into the blood stream at once; but it must be remembered that this method is not without danger and does not receive any considerable support from those who know most concerning malaria. It may be admissible in emergencies.

The ordinary routine is to give a purgative and follow it with quinine, about thirty grains, the last dose about the time of the expected paroxysm. This will usually stop the ordinary attacks of *P. vivax* but in infections of *P. falciparum*, often remittent in type and like typhoid treatment, must be thorough and continued. To determine the type of infection in hand and apply the proper remedy, to follow up with repeated blood examinations and ultimately eradicate malaria of the chronic form from the system is a very nice medical procedure. Recent experiments seem to indicate that the *P. malaria* and *P. falciparum* may be destroyed more effectively with a combination of quinine and arsenic than with quinine alone. With the combined treatment the number of parasites have been reduced from 85 to 95 per cent in three days, while they remained practically unchanged under the administration of quinine alone.

Many of the problems of malaria have been solved, merely to have new ones present themselves. In many parts of the country it may be regarded as a rapidly disappearing disease, while in others it remains a stubborn menace to progress.

DISCUSSION

DR. J. B. WHARTON, El Dorado: I know of no man in Union County that knows more about malaria than Dr. McGraw does. I have been associated with him for 28 years in the practice here, and he has had a valuable experience in the treatment of malaria. I have nothing to add to his paper. I might say that I have seen in my experience in the last twenty years a great many cases of enlarged spleen due to malarial infection. Some of them were operable with favorable results.

DR. C. T. DRENNEN, Hot Springs: We, of Hot Springs are not supposed to know too much about anything unless it be syphilis, and we have about arrived at the point now where we know that we do not know all about that.

There is one class of ailments that continues to come our way, and that is malaria. Much might be said, but little added to the very splendid paper of Dr. McGraw concerning treatment of malaria.

Permit us to suggest that altogether too much we are forgetting the patient and giving too much direct attention to the disease itself. It is an excellent thing never to forget one most important thing, and that is to take into consideration the general condition of the patient, and get his or her condition in the best possible shape that we can. In order to do so we find it best to give direct attention to wholesome food, proper exercise, and water drinking. We find after patients have arrived at Hot Springs suffering with chronic malaria that the microscope does not show the malaria parasite upon arrival of the patient, but after having taken from three to seven hot baths not infrequently an acute attack of malaria will be developed. However, if that does not occur, in many instances you will find without difficulty

the parasites in the blood. We make it a rule to give to these patients a reasonable amount of outdoor exercise, knowing full well that after all oxygen is the source of all life, and if they can get the pure, sweet, fresh air that much of the detritus will be literally burned up within the system through exercise alone.

Much can be done by proper administration of water internally. We make it a rule to have our patients drink a glass full of the natural hot water about a half hour before their meal. During the meal they are not to drink anything at all, but before leaving table we have them drink one glass full of whatever they are accustomed to. After the meal, about an hour or an hour and a half, we begin having them drink a glassful of water every fifteen or twenty minutes until three to 5 glasses have been drunk between the morning and noon meal, the same procedure to be repeated during the afternoon. It is not best to drink more than two or three glasses after the evening meal, for the reason that the patient may be annoyed at night getting up and down emptying the bladder. You will note in drinking water after this fashion that it is well nigh impossible for the patient to bolt his food. Again we know the saliva plays the chief role in the digestion of all our starchy foods, which is absolutely necessary. It will be found in many instances that these same patients, upon thorough examination, will be found to have other ailments which demand our attention.

DR. BERTRAM L. WARE, Greenwood: There are just two questions I wish to ask. I noticed in coming into this city, that the country has been pretty well drenched with crude oil. I just want to ask Dr. McGraw if that has cut down the prevalence of malaria?

The second question is: What the little school boy usually asks, when you tell about the origin of malaria, and tell him that he gets it only from the mosquito's bite and that mosquito must first have bitten a malarial patient, immediately the boy wants to know, "How did it start?"

DR. MCGRAW, in response: I do not know that we have any increase in malaria since the oil came. I believe that the mosquito problem has been aggravated some. We get some salt water wells sometimes, and it seems a touch of salt water in these streams does make the mosquito grow wonderfully. I believe that the mosquito problem would have been worse had we not instituted vigorous measures to control it.

It is a fact that heat develops the malarial parasite. We begin to have the benign tertian fairly early in May and June; whereas, we do not have the plasmodium falciparum or the pernicious form of malaria, until after July and August; it usually comes along in the fall. It just occurred to me that these very hot baths have a tendency to bring out the latent parasites that are there.

CROUPOUS PNEUMONIA AND BRONCHOPNEUMONIA

J. P. Crozer Griffith, Philadelphia (Journal A. M. A., Nov. 3, 1928), makes a study of the relative incidence of croupous pneumonia and bronchopneumonia, respectively, and the dif-

ferential diagnosis of the two forms. He has studied twenty-six cases in which a diagnosis of pneumonia had been made during life either by clinical or by roentgen examination or by both, all the cases having come later to autopsy. There is no effort being made to prove the superiority of clinical over radiologic diagnosis or the reverse. Every physician realizes that the two must be used in conjunction and as a mutual check. The author believes that the clinical diagnosis between croupous pneumonia and bronchopneumonia was too often dependent on the views of the individual examiner. He shows a few comparative statistics as given by different writers. The ratio between croupous pneumonia and bronchopneumonia varies from 1 to 16.9 to 1 to 0.51 in children in the first two years, and from 1 to 6.00 to 1 to 0.31 in infants and children in general. It is manifest that this wide variation in the ratio of the two forms of pneumonia cannot be accounted for by locality, season, social conditions or, in fact, any other factor than the personal equation of the investigator. The diagnosis is of great importance when it can be made, from the point of view of prognosis, and in many cases it can be made with reasonable certainty, but in many others it cannot. It is the general opinion that croupous pneumonia runs, as a rule, a very favorable course in childhood; but even this is disputed. Of the twenty-six cases the clinical, roentgen and autopsy diagnoses agreed in only six instances. In ten cases the clinical and x-ray diagnosis agreed, but in four of these neither diagnosis was correct. In sixteen cases the clinical and x-ray diagnoses disagreed, and of these the clinical diagnosis was correct in nine instances and the x-ray diagnosis in six, and neither of them in one case. Leaving out the six cases in which all three diagnoses were the same, it is noted that of the remaining twenty cases the clinical diagnosis was confirmed in nine instances and the x-ray diagnosis in six, while in five neither was correct. Both physical examination and roentgen examination are of value; neither can be accepted as beyond doubt in very many instances. When the two agree, the probability of correctness of diagnosis should be greatly increased.

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Editorials

A NEW MEDICAL JOURNAL

The officers of the Tri-State Medical Society (Arkansas, Texas and Louisiana) have launched a new medical journal to be published at Shreveport and mailed to its members, just as the Journal of the Arkansas Medical Society is distributed. We acknowledge receipt of No. 1, Volume 1, the October issue, and find it full of interesting and valuable reading matter. It includes the customary foreword by the editor setting forth its aims and aspirations. There are well written, educational, scientific articles, an editorial greeting from Dr. R. H. T. Mann of Texarkana, President of the Arkansas Medical Society and news items of interest to physicians. If the first number may be considered a criterion, the journal should prove a valuable accessory to the society and a factor in its growth.

There cannot be too many medical journals; in fact, every association of medical men should have such an organ. "Reading maketh a full man" according to Solomon. The medical journal is a means of spreading information, of exchanging experiences, of citing unusual cases of disease and unusual treatments, thus enlarging one's knowledge and tending to bring the members of the society in closer touch with each other.

We heartily congratulate Drs. Caldwell and Gilmer for their excellent journalistic achievement, and, in the words of Rip Van Winkle, may their new venture "live long and prosper."

CANCER TALKS ON THE AIR

The radio, while largely used as a means of entertainment by radio fans, is being pressed into service to diffuse propaganda on all manner of live issues. Advertisers use it to cry their wares; in fact, the commercial uses are necessary to keep the many broadcasting stations going. Preachers use it to broadcast their services and sermons and thus reach thousands of non-church goers. Politicians use it very freely in these pre-election days and the speeches of the candidates and other orators are broadcast directly from the rostrums so that millions of people from coast to coast receive it simultaneously with the hearers actually present at the meetings.

The daily newspaper has been esteemed as the greatest possible medium for the wide-

spread diffusion of news and public opinion. It may truly be said that the radio is a greater and more far-reaching medium. This is especially true of such propaganda as that concerning cancer. For several years campaigns for the eradication, or at least for the lessening of cancer have been waged by the various medical societies throughout the United States. Before the radio became in practically universal use, the newspaper was undoubtedly the best medium to distribute information tending to diminish the number of cancer cases by urging prompt examination by physicians of even the slightest indication or possibility of cancer developing. But the majority of newspaper readers read only what is of immediate interest to them. There are thousands who start and finish with the sport pages. Murders, crime of all kinds, scandals, sensational news appeal to perhaps the majority; but when it comes to scientific articles on the prevention of cancer comparatively few are concerned. Those in whose families, immediate or remote members have suffered and died of the cancer plague may take heed; but it is safe to say that 90 per cent of all casual readers of newspapers will see the headline of such an article and pass on to something more exciting.

The motion picture has largely supplanted the stage. Why? Because it is less trouble, requires less mental effort, to see a drama or story in pictures, the general idea represented by brief sub-titles and explanations, than to hear all the spoken words. In like manner people find it easier to listen than to read about any manner of scientific matter. Thus it well may be that millions of people listen in on the radio talks on cancer who never would read the shortest article on the subject in their daily newspaper. Arkansas has not been behind in this cancer prevention propaganda and the talks by leading physicians over the air must have done a world of good among people who would not otherwise have been enlightened on this important subject.

NEW EATING HABITS FOR OLD

By HELENA L. WILLIAMS

Twenty-five years ago it was commonplace for a business man to eat three hearty meals a day; including perhaps chops for breakfast, steak for lunch, roast beef for dinner. Also, twelve course dinners and heaping portions

were the ideal of the perfect hostess.

Those were the good old days when waist-lines were a merely feminine problem and paunches were an indication of prosperity.

But the day of overstuffed bodies has passed. Nowadays doctors recommend a moderate diet with meat not more than once a day, and it is not unusual to see men of affairs eating a bowl of milk and crackers for lunch. While children should be encouraged to maintain a weight slightly above the average, for healthy adults past forty, a few pounds under the average or "normal" weight provide the "margin of safety."

The change has come about for several reasons. We have acquired a wholesome dread of overweight. Overweight is useless baggage. It may bring on a high blood pressure for one thing, which in turn may cause a serious heart condition and other ailments. Then too, surplus weight is like unburnt carbon which clogs the cylinders. We have found that overeating causes mental sluggishness. And in this age of high-pressure business methods, no one can afford to be so handicapped. Moreover, the average business man takes less exercise than he needs, so that his body does not require as much fuel as that of the physically active person.

Nutrition experts agree, however, that many of us do not eat well-balanced meals. In recent years they discovered that leafy green vegetables are of vital importance in the human diet, and it has become a hard task to make the public appreciate this fact. Vegetables such as cabbage, kale, string beans, celery, spinach, beet greens, dandelion greens, turnip greens and water cress are called the "protective foods." They contain the vitamins that are essential for growth and that protect against certain diseases such as rickets, scurvy and pellagra. Vitamins also help to keep at par bodily resistance against tuberculosis. It is not impossible to have fresh vegetables even on the table of the city family, for with modern transportation and refrigeration they are obtainable the year round.

Starchy foods are also essential, though potatoes, beans, spaghetti, and cereals should not outbalance green vegetables.

The so-called "tubers," including carrots, beets, turnips and other root vegetables should also be included. Fruits are far more valuable than sweets, of which Americans, by the way, eat a vast quantity. Recent figures show that we consume about 100 pounds of sugar per

person per year, or about one-sixth of our daily energy supply. "This" says *Food, Nutrition and Health*, "crowds out an equivalent amount of the food which, if used instead of sugar, would supply all the things in which sugar is lacking. Sugar contains no structural materials, no vitamins and no mineral elements."

Public education in a healthful diet is one of the activities of the National Tuberculosis Association and its affiliated organizations which will conduct the twenty-first Christmas Seal Sale in December.

Abstracts

CASE OF MAGNESIUM SULPHATE POISONING

Harvey S. Thatcher, Little Rock, Ark. (Journal A. M. A., Oct. 20, 1928), reports the case of an American farmer, aged 26, poorly nourished, who had a provisional diagnosis of psychoneurosis of the neurasthenic type. At 6 a. m., he was evidently accidentally given a dose of magnesium sulphate. He was found dead at 7:10 a. m. Approximately 1 liter of yellowish brown fluid was present in the stomach and a dark red and hemorrhagic appearance of the lining of the stomach and small intestine, and considerable blood was mixed with the contents. The chemist reported 883½ grains (57 Gm.) of magnesium sulphate in the contents of the stomach. As the dosage is 240 grains (15.5 Gm.), the amount recovered was more than three times the required dose. The case reported illustrates that more care should be exercised in the administration of magnesium sulphate. Toxicity may result without death. An idiosyncrasy may exist and the average dose may be toxic. If toxicity does occur after its use, the treatment consists of the subcutaneous or intravenous administration of calcium salts. According to Meltzer and Auer, there is an antagonistic action of calcium on the inhibitory effect of magnesium.

EFFICACY OF TONSILLECTOMY FOR REMOVAL OF FOCAL INFECTION

Clinical experience with patients who have undergone tonsillectomy has led Paul S. Rhoads, Evanston, Ill., and George F. Dick, Chicago (Journal A. M. A., Oct. 20, 1928), to the belief that the disappointing results reported by various observers may often be due

to the fact that in a large number of instances the tonsils are incompletely removed. They have had several patients who were not benefited by their original tonsillectomies but who did improve strikingly after the removal of infected pieces of tonsillar tissue left from the first operation. In routine physical examinations of the nurses entering training at the Presbyterian and Cook County hospitals, they have found fairly large pieces of tonsillar tissue remaining in the throats of 290 of 403 (73 per cent) who have had tonsillectomy. That such "tonsil stumps" frequently cause trouble is shown by a series of twenty-three cases collected almost entirely from their own services in less than a year, in every one of which the indication for tonsillectomy was definite and in which improvement resulted in all that were followed. The bacterial count, microscopic appearance and association with systemic lesions of a series of tonsils removed for the first time is compared with similar data on "tonsil stumps" remaining from previous tonsillectomies and removed for a variety of reasons. The average count per gram in the "tonsil stumps" was 7,341,000, as compared with 5,693,000 in tonsils removed for the first time. The total weight of the "stumps" removed from a single patient varied from 0.575 to 5.496, averaging 2.174 Gm., while that of tonsils removed for the first time varied from 3.243 to 9.80, averaging 5.918 Gm. The average total bacterial count of the "tonsil stumps" removed from a single patient was 15,588,000, while that of tonsils removed for the first time was 33,345,000. The outstanding change in the "tonsil stumps" examined was fibrosis.

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society met in Siloam Springs, October 11, at 2:00 p. m., with an attendance of fifteen.

Papers and clinical cases were presented by Drs. Harrison of Lowell, Duckworth and Scott of Siloam Springs.

Drs. Curry and McNeil of Rogers, and Atkinson of Bentonville were appointed a committee to form resolutions of respect for Dr. C. A. Rice of Rogers, deceased.

A large number of the members attended the annual Tenth Councilor District meeting, held at Fort Smith.

Personal and News Items

Dr. T. J. Woods of Evening Shade recently visited in Little Rock.

Dr. and Mrs. J. P. Sheppard of Little Rock have returned from a month's stay in New York.

Dr. R. H. T. Mann of Texarkana, announces that Dr. Albert H. Mann is now associated with him in the practice of Ophthalmology and Otolaryngology.

Dr. J. Cabell Minor, Hot Springs National Park, announces the removal of his offices to the second floor of the Wade Building.

Mr. and Mrs. James R. Demby of Nowata, Oklahoma, announces the marriage of their daughter Kathryn to Dr. Henry Clay Chenuault, October 7, 1928. They will be at home in the Shaw Apartments, Hot Springs, Ark.

ARKANSAS MORTALITY STATISTICS 1927

Washington, D. C., October 31, 1928—The Department of Commerce announces that the 1927 death rate for Arkansas was 952 per 100,000 population. Arkansas was admitted to the registration area for 1927. The highest rates were for diseases of the heart (90 per 100,000 population), tuberculosis, all forms (77), nephritis (61), pneumonia, all forms (54), malaria and cancer (each 42), and pellagra (34). Diarrhea and enteritis, under two years and influenza had each a rate of 26 per 100,000 population, typhoid and paratyphoid fever, a rate of 23, and the death rate from homicide was 16 per 100,000 population.

The estimated population in 1927 was 1,923,000.

STATE MEDICAL AUXILIARY MEETS

The fall meeting composed of the officers and chairman of the standing committees of the Woman's Auxiliary to the Arkansas Medical Society, was observed at a luncheon at the Peacock, October 17, Little Rock. The State President, Mrs. T. G. Porter, of Hazen, presided during the luncheon and later business session. Others present were: Mrs. C. G. Hinkle of Batesville, President-Elect; Mrs. C. E. Oates of Little Rock, Vice-President; Mrs. J. R. Lynn of Hazen, Secretary; Mrs.

William R. Bathurst of Little Rock, Publicity Secretary; Mrs. B. A. Rhinehart of Little Rock, Treasurer; Mrs. Dewell Gann, Sr., of Benton, Parliamentarian; Mrs. C. W. Garrison of Little Rock, Historian and President of the Woman's Auxiliary, Southern Medical Association.

Among the various chairmen present were: Mrs. E. L. Thompson of Hot Springs, Chairman of Organization; Mrs. J. C. Cunningham of Little Rock, Chairman of Juniors; Mrs. C. T. Drennen of Hot Springs, Chairman of Public Relations; Mrs. C. E. Oates of Little Rock, Chairman of the Student Loan Fund; Mrs. F. M. Williams of Hot Springs, Chairman of the Memorial Committee; Mrs. L. D. Reagan of Little Rock, Chairman of Education and public health; Mrs. W. R. Brooksher of Fort Smith, *Hygeia*, and Mrs. B. A. Bennett of Little Rock, Finance.

Others present that took part in the meeting were: Mrs. R. H. T. Mann, Texarkana; Mrs. Marcus T. Smith, Conway; Mrs. Grayson Tarkington, Hot Springs, and Mrs. S. A. Drennen, Stuttgart. Favorable comment was made by President Porter on the proposed State Charity Hospital and Basic Science Law.

PULASKI COUNTY AUXILIARY MEETS

The Auxiliary to the Pulaski County Medical Society held their first meeting of the season at luncheon given at the Peacock, October 17th. On account of illness of the President, Mrs. J. C. Cunningham, Mrs. C. E. Oates presided. Following a general discussion of the winter activities, each one was presented with a Year Book of the Auxiliary.

The officers, committee chairmen, and place of meetings are as follows:

OFFICERS

President, Mrs. J. C. Cunningham; President-elect, Mrs. Chas. E. Oates; Vice-President, Mrs. Stacy C. Howell; Secretary, Mrs. Barton A. Rhinehart; Publicity Secretary, Mrs. R. C. Kory; Treasurer, Mrs. A. W. Strauss; Historian, Mrs. T. M. Fly; Parliamentarian, Mrs. Pat Murphey.

COMMITTEE CHAIRMEN

Program, Mrs. Chas. E. Oates; Membership, Mrs. Homer Scott; Finance, Mrs. T. M. Fly; Public Relations, Mrs. B. A. Rhinehart; Education and Public Health, Mrs. J. B. Crawford; Visiting, Mrs. F. E. Hurtle; Telephone, Mrs. B. A. Rhinehart; Student Loan Fund,

Mrs. Chas. E. Oates; Medical Students' Wives, Mrs. K. W. Cosgrove; Entertainment, Mrs. Wm. R. Bathurst; Memorial, Mrs. W. Robert Richardson.

MEETINGS

October 17, Luncheon at the Peacock, 12:30 P. M.

November 21, Hostess, Mrs. E. H. Wilkes, 2100 West 17th St.; Co-hostesses, Mrs. N. W. Riegler and Mrs. J. R. Wayne.

December 19, Hostess, Mrs. Wm. R. Bathurst, 1433 Prospect Ave.; Co-hostesses, Mrs. T. M. Fly and Mrs. S. B. Hinkle.

January 16, Hostess, Mrs. J. C. Cunningham, 10 Ozark Point; Co-hostesses, Mrs. R. A. Law and Mrs. R. E. Pryor.

February 20, Hostess, Mrs. O. K. Judd, 307 West 17th St.; Co-hostesses, Mrs. D. M. Switzer and Mrs. J. A. Summers.

March 20, Hostess, Mrs. R. M. Eubanks, 510 North Elm St.; Co-hostesses, Mrs. W. E. Gray and Mrs. A. T. McKinney.

April 17, Hostess, Mrs. J. H. Lenow, 1218 West 3rd St.; Co-hostesses, Mrs. E. O. Day and Mrs. W. E. Bailey.

May 15, Hostess, Mrs. K. W. Cosgrove, 1824 Wright Ave., Co-hostesses, Mrs. Bryce Cummins, Mrs. J. P. Delaney, Mrs. S. F. Hoge.

Correspondence

Leningrad, 7-30-28,
34 Line of Mendelleef.

Henry Anatol Manat, B. A.
Isaac Folsom Clinie,
University of Arkansas.

My Dear Henry Anatol Monat:

My method of treatment is published in English in the following Journals: First, The Journal of Obstetrics and Gynecology of the British Empire, V. 30, Spring, 1923. Second, The Lancet, N. 5263, July 2, 1924. Third, Brief and excellent description was published in N. Y. State Journal of Medicine, V. 27, No. 2, January 15, 1927 by Dr. Stewart B. Blakely.

In the last named Journal, an error was made in stating that I use morphine sulphate, while I administer morphine hydrochloride. This Journal also failed to state that in case I receive an eclamptic patient who gives a history of six or more convulsions I immediately resort to bleeding (provided she is not going

to be delivered in the next two or three hours). As you can epitomize from reading my articles the main things to bear in mind are: First, the perfection of the prophylaxis, in order to abort the convulsions and second, to improve all the vital functions of the patient. But the most important thing is to prevent the occurrence of the convulsions which may be attained by:

1. *Keeping the patient free from any possible irritation.* This point is generally under-emphasized and very little weight is attached to it, meanwhile it has paramount importance. In the past it was thought that the eclamptic patient does not see, hear or feel. This viewpoint is obsolete. Subconsciously they are even hypersensitive!

2. Give such an amount of morphine and chloral hydrate that the convulsions stop. In the above named publications you will find medium doses of morphine, chloral hydrate and chloroform, but for the start I advise you to give large doses, and in obstinate cases, simultaneous administration of morphine and chloral hydrate.

3. *If possible procure a delivery of the patient.* Not with dangerous operations, but by means of forceps, manual method, perineotomia, rarer by version.

4. It is very important to support the normal activities of the skin, kidneys, heart and lungs. Warm, comfortable bed, *light* cover, constant observation by an experienced man, knowing all the details of treatment, induction of 800 to 1,000 cc. of milk and physiological salt solution, per rectum, to which we may add some chloral hydrate, or light tea with milk per os when patient is conscious; Oxygen after the attack, thorough cleaning of the mouth and nose from sputum, blood, et cetera, the side position of the patient, usually on the right side. All this constitutes the treatment which is so easy to adopt and to practice.

The main thing again is to stop convulsions. I have to remark that the use of narcotics should be prolonged, usually 24 hours after the seizure of convulsions and only in light cases; in post partum eclampsia to continue twelve hours only.

5. If, notwithstanding the treatment, we observe three more convulsions or two severe ones, immediately resort to bleeding of 400 cc. Of course, the perfection of the technic and constant and thorough care of the patient are of importance. Even right now I can

assert an absolutely favorable prognosis in not neglected and not infected cases of eclampsia; but I hope to improve my method in the course of time.

To my regret I was suspended from my clinic and am forced to work in a strange clinic under very unfavorable conditions. It astonished me that physicians of all cultural countries do not adopt my method in all its details. Especially American doctors mystify me, as the mortality there from eclampsia is very great.

With kindest regards,

Yours sincerely,
W. Stroganoff,

Translated from Russian by H. A. Manat

EXERCISE IN CARDIAC DISEASE

David P. Barr, St. Louis (Journal A. M. A., Nov. 3, 1928), emphasizes several principles which have a bearing on the conception of exercise in cardiac disease. He says: In the study of muscular exertion two kinds of inadequacy must be considered separately. The first of these is a failure to supply the tissues with sufficient blood and oxygen. This may occur in any person at all, from the most highly athlete to the severely decompensated cardiac patient—but with different amounts of work. Whenever it occurs there is an oxygen debt, an accumulation of lactic acid and an exaggerated pulmonary response. Intrinsically it does not imply any abnormality, or cardiac weakness. The second form may be designated congestive heart failure and arises because the cardiac output does not keep pace with the inflow of blood to the heart. It is usually if not always dependent on myocardial insufficiency or disease. It occurs earlier and with less exertion when a mechanical factor, such as mitral stenosis, is also present. In normal persons, exercise may be attempted in which sufficient supply of blood and oxygen to the tissues is impossible. Congestive cardiac failure, however, does not occur because respiratory factors limit the exercise before the maximum cardiac response has been attained. The patient with heart disease incurs an oxygen debt from more trivial causes. Dyspnea occurs earlier and is more severe. As in normal persons, the lungs may be the limiting factor and may protect the heart. The protection, however, may be insufficient and congestive heart failure may result. In both normal persons and cardiac patients, dyspnea is

the greatest safeguard against the possibility of heart strain and cardiac failure. Patients who have mechanical factors such as mitral stenosis have greater dyspnea and are more factor is absent. In patients in whom this factor is absent. In patients with syphilitic disease of the aortic valve, with chronic hypertension and perhaps with myocardial defects, it may not be safe to accept dyspnea as the warning signal for the control of exercise. The observance of other symptoms or, indeed, an entirely arbitrary limitation of exertion, may be necessary to furnish sufficient protection.

Book Reviews

Clinical Case-Taking.—Supplement to Methods in Medicine. By George R. Herrmann, M. D., Ph. D., Assistant Professor of Medicine, Tulane University, New Orleans, La. Published by The C. V. Mosby Company, St. Louis, 1927. Price, \$1.50.

This booklet serves as a guide for the study of the patient and for the comprehension of clinical medicine.

Minor Surgery.—By Arthur E. Hertzler, M. D., F. A. C. S., Chief Surgeon, Halstead Hospital and Victor E. Chesky, A. B., M. D., F. A. C. S., Chief Resident Surgeon, Halstead Hospital. With 438 illustrations. Published by The C. V. Mosby Co., St. Louis, Mo., 1927. Price \$10.00.

This volume gives concisely the practical points on minor surgery. A very useful book. The subjects are covered in twenty-one chapters, with 438 illustrations.

Emergencies of a General Practice.—By the late Nathan Clark Morse, A. B., M. D., F. A. C. S., Revised and Rewritten by Amos Watson Colcord, M. D., Surgeon, Carnegie Steel Co.; Surgeon, Pennsylvania Railroad System. Second Edition. Published by the C. V. Mosby Company, St. Louis Mo., 1927. Price, \$10.00.

This book describes every day accidents that frequently confronts the general practitioner at a time when least expected, such as fractures and dislocations; first aid; treatment of asphyxiation, medical, surgical and obstetric emergencies.

Diseases of the Skin.—By Henry H. Hazen, A. M., M. D., Professor of Dermatology in the Medical Department of Georgetown University. Third Edition. 148 illustrations, including two color plates. Published by the C. V. Mosby Company, St. Louis, Mo., 1927. Price, \$10.00.

In this book Dr. Hazen describes the skin diseases which are now attracting attention, and which are probably much more common than has been realized. It is of convenient size and well illustrated.

List of Members of the Arkansas Medical Society for 1928

ARKANSAS COUNTY

Dickens, Homer	DeWitt
Drennen, S. A.	Stuttgart
Fowler, Arthur	Humphrey
Henry, C. A.	DeWitt
John, M. C.	Stuttgart
Lowe, W. W.	Gillett
Lowe, A. M.	Gillett
Neighbors, J. E.	Stuttgart
Park, Chas. E.	DeWitt
Rasco, C. W.	DeWitt
Riley, H. C.	Bayou Meto
Strait, C. W.	Stuttgart
Swindler, E. B.	Stuttgart
Whitehead, R. H.	Gillett
Winkler, E. H.	DeWitt
Winters, H. B.	Ben Wheeler, Texas
Whitehead, R. H.	Gillett
Word, J. F.	St. Charles

ASHLEY COUNTY

Barnes, L. C.	Hamburg
Cockerham, H. E.	Portland
Cone, A. E.	Portland
Crandall, M. C.	Wilmot
Fletcher, G. W.	Montrose
Hawkins, M. C.	Parkdale
Holliday, B. F.	Parkdale
Houston, M. F.	Hamburg
Norman, W. S.	Hamburg
Simpson, J. W.	Hamburg
Spivey, C. E.	Crossett
White, E. O.	Crossett
Wood, J. T.	Crossett

BAXTER COUNTY

Appleby, Scott	Cotter
Baldwin, W. S.	Cotter
Morrow, J. J.	Cotter
Tipton, J. T.	Mountain Home
Tipton, W. C.	Colony, Okla.

BENTON COUNTY

Atkinson, R. M.	Bentonville
Buffington, G. H.	Decatur
Clemmer, J. L.	Gentry
Cox, W. T.	Gentry
Crockett, C. S.	Lincoln
Curry, W. J.	Rogers
Duckworth, F. M.	Siloam Springs
Duncan, M. W.	Centerion
Eubanks, F. G.	Decatur
Greene, L. O.	Pea Ridge
Gulledge, Jno. F.	Siloam Springs
Harrison, A. J.	Lowell
Highfill, E. J.	Cave Springs
Hodges, Guy	Rogers
Horton, C. W.	Hiwassee
Hughes, J. A.	Siloam Springs
Hurley C. E.	Bentonville
Ireland, W. W.	Gentry
Koobs, H. J. G.	Rogers
Lindsey, J. H.	Bentonville
Love, Geo. M.	Rogers
McNeil, Clyde L.	Rogers
Montgomery, Chas. C.	Kansas City
Moore, W. A.	Rogers
Pickens, W. A.	Bentonville
Powell, J. T.	Gravette
*Rice, C. A.	Rogers
Scott, L. L.	Siloam Springs
Smiley, J. L.	Siloam Springs
Steele, R. W.	Siloam Springs
Thompson, J. S.	Gravette
Wilson, C. S.	Gentry

BOONE COUNTY

Blackwood, J. C.	Harrison
Brand, W. M.	Lead Hill
Evans, D. E.	Harrison
Fowler, J. H.	Harrison
Fowler, T. P.	Harrison
Gladden, J. G.	Western Grove
Jackson, G. I.	Harrison
Johnson, J. J.	Harrison
Kirby, F. B.	Harrison
McCurry, D. K.	Alpena Pass
McFerrin, J. O.	Jasper
Owens, D. L.	Harrison
Poynor, Wm. H.	Harrison
Routh, C. M.	Harrison
Sims, J. L.	Harrison
Watkins, W. L.	Alpena Pass

*Deceased.

BRADLEY COUNTY

Crow, M. T.	Warren
Fike, W. T.	Warren
Ganaway, C. E.	Warren
Hartsell, W. L.	Warren
Johnson, R. L.	New Edinburg
Martin, C. N.	Warren
Martin, Rufus	Warren
Reasons, W. B.	Hermitage
Roark, W. N.	Hermitage
Wilson, Geo. L.	Banks

CALHOUN COUNTY

Black, Chas T.	Thornton
Jones, E. T.	Hampton
Rhine, T. E.	Thornton

CARROLL COUNTY

Bohannan, J. H.	Berryville
Butt, Wm. Alvin	Green Forest
Carter, A. L.	Berryville
Donaldson, C. W.	Green Forest
Huntington, R. H.	Eureka Springs
John, J. F.	Eureka Springs
Kemp, Hardy A.	Eureka Springs
Pace, Henry	Eureka Springs
Webb, J. H.	Eureka Springs

CHICOT COUNTY

Baker, E.	Dermott
Barlow, E. E.	Dermott
Clark, B. C.	Lake Village
Craig, W. A.	Eudora
Douglas, S. W.	Eudora
Easterling, Walter D.	Lake Village
Easterling, W. W.	Eudora
Henry, R. N.	Lake Village
McGehee, E. P.	Lake Village
Parr, H. H.	Eudora
Thompson, J. A.	Dermott
Wilson, J. S.	Lake Village

CLARK COUNTY

Alford, J. E.	Okolona
Bremer, J. P.	Point Cedar
Carter, F. E.	Arkadelphia
Doane, S. N.	Arkadelphia
Hughes, F. A.	Okolona
Kirby, D. W.	Gurdon
Kirkham, Z. L.	Okolona
Moore, J. S.	Arkadelphia
Moore, W. M.	Arkadelphia
Purtle, C. C.	Graysonia
Ross, H. A.	Arkadelphia
Rowland, W. T.	Arkadelphia
Townsend, Chas. K.	Arkadelphia
Townsend, N. R.	Arkadelphia
Wallis, C. R.	Arkadelphia
Wright, Chas. E.	Gurdon

CLAY COUNTY

Cunning, I. H.	Knobel
Hiller, J. P.	Pollard
Jones, F. H.	Piggott
Latimer, N. J.	Corning
Lunt, J. P.	Rector
McGuire, J. E.	Piggott
Newkirk, C. H.	Corning
Pfeiffer, E. M.	Corning
Poole, W. I.	St. Francis
Richardson, M. C.	Datto
Walker, J. F.	El Dorado

CLEBURNE COUNTY

Hall, H. J.	Higden
Matthews, J. T.	Heber Springs

CLEVELAND COUNTY

Adams, Thos. L.	Rison
Ellis, W. S.	New Edinburg
Hamilton, A. J.	Rison
Harris, Sidney	Herbine
Henderson, Thad.	North Little Rock
Johnson, S. C.	Kingsland
McMurtrey, J. S.	Rison
Wilson, H. O.	Rison

COLUMBIA COUNTY

Baker, J. J.	Magnolia
Carrington, H. K.	Magnolia
Cooksey, W. P.	Magnolia
Horn, W. H.	Taylor
Hudnall, E. T.	Taylor
Hunt, Wm. J.	Magnolia
Jones, T. H.	Magnolia
Jordan, T. S.	Taylor
Kitchens, H. M.	Waldo
McDonald, A. J.	Spring Hill, La.
McLeod, G. F.	Magnolia
McWilliams, C. T.	Magnolia
Mullins, G. E.	Emerson
Smith, P. M.	Magnolia
Sauter, Thos. E.	McNeil
Souter, A. J.	Waldo

CONWAY COUNTY

Bradley, A. R.	Morrilton
Bruce, W. H.	Morrilton
Close, E.	Jerusalem
Colay, Jno. H.	Cleveland
Fleming, J. T.	Perry
Goatcher, A. L.	Plumerville
Hardison, T. W.	Morrilton
Halbrook, J. F.	Plumerville
Holloway, W. R.	Center Ridge
Jackson, J. H.	Springfield
Jones, R. A.	Perry
Jones, Wm. Edgar	Morrilton
Logan, B. C.	Morrilton
McMahan, John Stephen	Clinton
Matthews, E. L.	Morrilton
Matthews, J. M.	Morrilton
Mobley, H. E.	Morrilton
Rieff, W. L.	Perryville
Stephens, A. H.	Casa

CRAIGHEAD COUNTY

Alcott, Geo. B.	Weiner
Altman, J. T.	Jonesboro
Baird, J. L.	Marked Tree
Barrett, R. M.	Black Oak
Bates, Chas. A.	Lake City
Burge, H. G.	Nettleton
Burns, R. B.	Jonesboro
Cothorn, Thad	Jonesboro
Ellis, Ira W.	Monette
Elders, J. W.	Harrisburg
Hafford, J. C.	Black Oak
Haltom, W. C.	Jonesboro
Handley, E. L.	Sycamore, Ala.
Hindman, D. S.	Bay
Horne, E. J.	Jonesboro
Howell, J. C.	Nettleton
Jackson, W. W.	Jonesboro
Jernigan, Roscoe M.	Jonesboro
Lutterloh, Chas. H.	Jonesboro
Lutterloh, P. W.	Jonesboro
McAdams, H. H.	Jonesboro
McCracken, C. P.	Jonesboro
McCurry, John H.	Cash
McDaniel, E. C.	Tyronza
McDaniel, L. H.	Tyronza
McGinnis, Thos. J.	Tilene, Ky.
Moreland, S. W.	Jonesboro
Moreland, W. H.	Tyronza
Nisbett, Frank	Brookland
Overstreet, W. C.	Jonesboro
Ramsey, J. W.	Jonesboro
Ratliff, R. W.	Jonesboro
Roberts, Fred	Lake City
Scott, A. G.	Jonesboro
Smith, W. H.	Bono
Stroud, H. A.	Jonesboro
Thorn, W. T.	Monette
Tullos, A. M.	Trumann
Verser, W. W.	Harrisburg
Waddell, Gracey A.	Bertrand, Mo.
Walker, B. F.	Jonesboro
Willett, R. H.	Jonesboro

CRAWFORD COUNTY

Bennett, B. L.	R. F. D. Van Buren
Blakemore, J. E.	Van Buren
Bourland, O. M.	Van Buren
Dibrell, M. S.	Van Buren
Galloway, Q. R.	Van Buren
Grant, S. C.	Mu'berry
Kirkland, Saml. D.	Quitague, Texas
Kirksey, O. J.	Mulberry
Mitchell, T. M.	Mountainburg
Reves, Wm. R.	Alma
Savery, H. W.	Van Buren
Stewart, Jno. M.	Van Buren
Trice, J. B.	Van Buren
Wigley, J. A.	Mulberry

CRITTENDEN COUNTY

Hammond, C. M.	West Memphis
Henry, Hugh B.	Memphis, Tenn.
McVay, L. C.	Marion
Parker, A. C.	Clarkedale
Stevenson, B. M.	Memphis, Tenn.
Watson, H. S.	Earl

CROSS COUNTY

Barner, W. B.	Wynne
Griffin, J. L.	Vanndale
Griffin, W. L.	Cherry Valley
*Hare, Jacob L.	Wynne
Longest, Ruffin	Wynne
McKie, J. D.	Wynne
McKie, W. H.	Wynne
Miller, J. S.	Parkin
Stewart, Thos. J.	Wynne
Wilson, Thos.	Wynne

DALLAS COUNTY

Atkinson, H. H.	Fordyce
Cheatham, H. A.	Princeton
Stewart, A. M.	Manning
Taylor, J. E. M.	Sparkman
Ward, W. P.	Fordyce
Wilson, J. F.	Dalark

DESHA COUNTY

Applewhite, R. E.	Winnsboro, La.
Biscoe, Gibbs	Dumas
Chenault, J. C.	McGehee
DeClark, W. H.	McGehee
Grayson, W. B.	McGehee
Isom, A.	Dumas
Kimbro, C. H.	Tillar
MacCammon, Vernon	Arkansas City
Miller, J. C.	McGehee
Smith, H. T.	McGehee
Watts, J. D.	Dumas
White, R. F.	McGehee

DREW COUNTY

Collins, A. S. J.	Monticello
Cotham, E. R.	Monticello
Duckworth, F. L.	Monticello
Gates, S. M.	Monticello
Jones, G. W.	Monticello
Kimbro, S. O.	Monticello
Lisenbee, A. M.	Sparkman
Pope, M. Y.	Monticello
Smith, R. N.	Collins

FAULKNER COUNTY

*Brown, Geo. S.	Conway
Burnett, M. C.	Wooster
Cureton, H. E.	Conway
Dawson, R. L.	Wooster
DeJarnett, J. W.	Conway
Dickerson, C. H.	Conway
Downs, J. H.	Vilonia
Fraser, N. E.	Conway
Hardy, H. B.	Greenbrier
Harrod, George	Conway
Henderson, G. L.	Conway
Huddleston, G. D.	Conway
Ingram, E. M.	Enola
Kitley, J. R.	Mayflower
Lieblong, J. S.	Greenbrier
Mabry, Thos.	Holland
McCollum, I. N.	Conway
McDonald, W. T.	Vilonia
McMahan, J. E.	Conway
Muse, J. M.	Conway
Smith, Marcus T.	Conway
Watson, T. C.	Mount Vernon
West, W. J.	El Paso
Westerfield, J. S.	Conway

FRANKLIN COUNTY

Blackburn, E. W.	Ozark
Bollinger, W. H.	Charleston
Douglass, Thos.	Ozark
Gibbons, W. H.	Ozark
Hansberry, A. J.	Ozark
Mooney, J. D.	Altus
Porter, W. C.	Ozark
Post, J. L.	Altus

GARLAND COUNTY

Biggs, Orvis	Hot Springs
Black, T. N.	Hot Springs
Blockshare, Wilbur M.	Hot Springs
Brewer, H. W.	Hot Springs
Browne, P. Z.	Hot Springs
Browning, E. R.	Hot Springs
Bruce, G. C.	Amarillo, Texas

*Deceased.

GARLAND COUNTY—Continued

Chamberlain, Warren	Hot Springs
Chesnutt, Jas. H.	Hot Springs
Clardy, Floyd	Hot Springs
Coffey, G. C.	Hot Springs
Collings, H. P.	Hot Springs
Connell, W. H.	Hot Springs
Dake, Chas.	Hot Springs
Deaderick, W. H.	Hot Springs
Diederich, V. P.	Hot Springs
Drennen, Chas. Travis	Hot Springs
Drennen, D. E.	Hot Springs
Eckel, G. M.	Hot Springs
Ellis, L. R.	Hot Springs
Ellsworth, E. H.	Hot Springs
Fletcher, Geo. B.	Hot Springs
Freeman, Isaac N.	Hot Springs
Garratt, C. E.	Hot Springs
Greene, J. L.	Hot Springs
Hebert, Gaston A.	Hot Springs
Jarrell, Foster	Hot Springs
King, Ossian H.	Hot Springs
Klugh, Walter G.	Hot Springs
Knoefel, W. R.	Hot Springs
Lautman, M. F.	Hot Springs
Laws, W. V.	Hot Springs
Lee, D. C.	Hot Springs
McKenzie, E. M.	Hot Springs
Martin, L. G.	Hot Springs
Merritt, J. F.	Hot Springs
Minor, J. C.	Hot Springs
Mobbs, Bert	Honolulu, Hawaii
Moss, Chas. S.	Hot Springs
Nims, C. H.	Hot Springs
Parks, Wm. P.	Hot Springs
Pate, C. N.	Hot Springs
Porter, Wm. F.	Hot Springs
Proctor, J. M.	Hot Springs
Purdum, E. A.	Hot Springs
Randolph, J. P.	Hot Springs
Robertson, J. A.	Hot Springs
Rowland, J. F.	Hot Springs
Sanders, T. E.	Hot Springs
Scully, F. J.	Hot Springs
Sharpe, S. B.	Hot Springs
Shaw, J. B.	Hot Springs
Short, Z. N.	Hot Springs
Simpson, Robt. A.	Hot Springs
Simpson, W. F.	Hot Springs
Smith, Oliver A.	Hot Springs
Smith, W. K.	Hot Springs
Snider, W. L.	Hot Springs
Steele, S. B.	Hot Springs
Stell, J. S.	Hot Springs
Stough, D. B.	Hot Springs
Strachan, J. B.	Hot Springs
Sullivan, A. G.	Hot Springs
Tarkington, Grayson E.	Hot Springs
Tarleton, F. S.	Hot Springs
Thompson, E. L.	Hot Springs
Thompson, Loyd	Hot Springs
Tribble, A. H.	Hot Springs
Vaughan, P. T.	Hot Springs
Wade, H. King	Hot Springs
Waldrop, J. G.	Hot Springs
Weil, S. D.	Hot Springs
Wenger, O. C.	Hot Springs
Wilkins, J. S.	Hot Springs
Williams, F. M.	Hot Springs
Wootton, W. T.	Hot Springs
Wright, Homer K.	Hot Springs

GRANT COUNTY

Butler, J. L.	Sheridan
Cole, C. F.	Prattsville
Hope, O. W.	Sheridan
Kelly, O. R.	Sheridan
Paxton, Robert L.	Sheridan
Sheppard, Irvin	Sheridan
Whitehead, S. H.	Sheridan

GREENE COUNTY

Baker, E. S.	Algiers, La.
Bridges, G. P.	Paragould
Clopton, O. H.	Marmaduke
Cohn, Geo.	Piggott
Dillman, James A.	Paragould
Ellington, Edgar	Lafe
Ellington, Walter E.	R. 6, Paragould
Ellis, B. E.	Greenway
Haley, R. J.	Paragould
Hardesty, C. A.	Paragould
Hopkins, G. T.	Paragould
Hudgins, J. J.	Paragould
Hutchins, W. P.	Manila
Kennedy, E. L.	Marmaduke
Lamb, Jones H.	Paragould
McKenzie, Jas. G.	Paragould
Majors, W. M.	Paragould
Scott, F. M.	Paragould

HEMPSTEAD COUNTY

Allison, Walter G.	Hope
Autrey, J. R.	Columbus
Cannon, G. E.	Hope
Carrigan, P. B.	Hope
Garner, W. M.	Hope
Gentry, J. E.	McCaskill
Lile, L. M.	Hope
Luck, J. L.	Hope
McDonald, Thos. Lee	Hope
Martindale, Geo. H.	Hope
Robins, Rual, R.	Hope
Robins, Wm. F.	Ozan
*Saner, W. F.	Ozan
Smith, Don	Hope
Weaver, J. H.	Hope

HOT SPRING COUNTY

Barrier, W. F.	Malvern
Bramlitt, E. T.	Malvern
Hodges, W. G.	Malvern
McCray, E. H.	Malvern
Norton, J. M.	Donaldson
Pharr, J. W.	Malvern
Prickett, Chas.	Malvern
Williams, J. M.	Malvern

HOWARD-PIKE COUNTY

Alford, T. F.	Murfreesboro
Anderson, J. B.	Ben Lomond
Dildy, E. V.	Nashville
Gibson, W. M.	Nashville
Holcombe, J. T.	Mineral Springs
Hutchinson, D. A.	Idabel, Okla.
Lee, Wm. Ridley	Mineral Springs
Peavy, J. L.	Dierks
Roberts, J. L.	Nashville
Toland, W. H.	Nashville

INDEPENDENCE COUNTY

Bone, O. L.	Newark
Burge, H. G.	Monette
Craig, M. S.	Batesville
Dorr, R. C.	Batesville
Evans, L. T.	Batesville
Gray, C. C.	Batesville
Gray, E. M.	Evening Shade
Gray, F. A.	Batesville
Hinkle, Chas. G.	Batesville
Hooper, J. M.	Batesville
Jeffrey, Paul H.	Bethesda
Johnston, O. J. T.	Batesville
Kennerly, J. H.	Batesville
Laman, G. T.	Cave City
McAdams, V. D.	Cord
Pascoe, V. L.	Newark
Robertson, S. N.	Sulphur Rock
Rodman, T. N.	Batesville
Sullivan, E. L.	Poughkeepsie
Woods, O. S.	Salem

JACKSON COUNTY

Best, A. L.	Newport
Causey, G. A.	Swifton
Elton, A. M.	Newport
Erwin, Ira H.	Newport
Gray, C. R.	Newport
Harris, M. L.	Newport
Ivy, Jno. B.	Tuckerman
Jamison, O. A.	Tuckerman
Kimberlin, K. K.	Tuckerman
Moore, W. P.	Newport
Morton, R. F.	Swifton
Owens, M. B.	Amagon
Pierce, W. N.	Tupelo
Stallings, Walker E.	Newport
Stephens, G. K.	Newport
Watson, E. L.	Newport
Wilson, W. F.	Pleasant Plains

JEFFERSON COUNTY

Beard, J. C.	Pine Bluff
Blankenship, W. H.	Pine Bluff
Capel, C. B.	Pine Bluff
Caruthers, C. K.	Pine Bluff
Chavis, W. M.	Pine Bluff
Clark, Oliver Wm.	Pine Bluff
Colquitt, S. W.	Pine Bluff
Crump, J. F.	Pine Bluff
Cunningham, T. J.	Pine Bluff
Davidson, J. S.	Pine Bluff
Gill, J. F.	Pine Bluff
Glover, C. A.	Pine Bluff
Gurney, J. O.	Pine Bluff
Hankinson, O. C.	Pine Bluff
Higinbotham, C. J.	Pine Bluff
Hughes, A. A.	Pine Bluff
Jenkins, J. S.	Pine Bluff
John, J. W.	Pine Bluff
Lemons, J. M.	Pine Bluff

JEFFERSON COUNTY—Continued

Lowe, W. T.	Pine Bluff
Luck, B. D.	Pine Bluff
McMullen, E. C.	Pine Bluff
Palmer, J. T.	Pine Bluff
Pittman, W. G.	Pine Bluff
Power, Paul H.	Pine Bluff
Pyatt, E. C.	Pine Bluff
Scales, J. W.	Pine Bluff
Shelton, M. A.	Wabbaseka
Simmons, Walter H.	Pine Bluff
Smith, S. E.	Pine Bluff
Spillyards, J. S.	Pine Bluff
Tankersley, Grace	Pine Bluff
Williams, Harry E.	Pine Bluff
Woods, R. P.	Alzheimer
Woodul, T. W.	Pine Bluff

JOHNSON COUNTY

Barger, M. I.	Lamar
Boen, A. L.	Clarksville
Burgess, M. E.	Pine Ridge, S. D.
Dunman, B. E.	Lamar
Hardgrave, G. L.	Clarksville
Horner, W. M.	Coal Hill
Hunt, E. H.	Clarksville
Hunt, Wm. R.	Clarksville
Kolb, J. S.	Clarksville
Siegel, G. R.	Clarksville

LAFAYETTE COUNTY

Armstrong, R. L.	Lewisville
Baker, F. E.	Stamps
Hammond, P. L.	Bradley
Jack, J. J.	Stamps
Keith, A. W.	Stamps
McKnight, J. F.	Bradley
Nichols, D. C.	Stamps
Youmans, F. W.	Lewisville

LAWRENCE COUNTY

Allen, Marshall	Walnut Ridge
Ball, C. C.	Ravenden
Guthrie, R. H.	Boston, Mass.
Guthrie, T. C.	Smithville
Hatcher, Wright W.	Imboden
Henderson, A. G.	Piggott
Hughes, J. C.	Hoxie
Johnston, Wm.	Hardy
Land, J. C.	Walnut Ridge
McCarroll, H. R.	Walnut Ridge
Neece, T. C.	Walnut Ridge
Robinson, W. J.	Portia
Rudy, D. B.	Imboden
Stidham, J. H.	Walnut Ridge
Townsend, C. C.	Walnut Ridge
Warren, G. A.	Black Rock
Watkins, Geo. Max	Walnut Ridge

LEE COUNTY

Bean, W. B.	Marianna
Beatty, W. S.	R. 1, Aubrey
Bogart, H. D.	Marianna
Chaffin, C. W.	Moro
Crawford, W. S.	Marianna
Ferrell, S. A.	Brickkeys
Lewis, John F.	R. 1, Marianna
McLendon, Mac	Marianna
Russwurm, S. C.	Hughes
Wall, E. D.	Marianna
White, H. L.	Rondo
Williamson, O. L.	Marianna
Wilsford, A. L.	Moro

LINCOLN COUNTY

Corney, R. B.	Little Rock
Dixon, Chas. W.	Gould
McClendon, J. M.	Gould
Ringgold, G. W.	Gould
Thioliere, A. C.	Gould
Wood, G. C.	Grady

LITTLE RIVER COUNTY

Castile, Herman	Texarkana
King, Edward R.	Earlsboro, Okla.
Nixon, A. M.	Arden
Norwood, Frank A.	Ellis Island, N. Y.
Phillips, Paul H.	Ashdown
Ringgold, J. W.	Ashdown
Vaughan, W. E.	Richmond
York, W. W.	Ashdown

LOGAN COUNTY

Hederick, A. R.	Booneville
Smith, A. M.	Paris
Smith, Jno. F.	Paris
Smith, J. J.	Paris
Stewart, John	Booneville

LONOKE COUNTY

Beaty, S. S.	England
Benton, T. E.	Lonoke
Bowers, A. L.	Scott
Brewer, John F.	Kerr
Callahan, E. A.	Carlisle
Chenault, J. C.	Hot Springs
Corn, F. A.	Lonoke
Corn, F. A., Jr.	Little Rock
Crowgey, W. B.	Scott
Cunning, John R.	Lonoke
Cunning, John Ed.	Ripley, Tenn.
Harris, Ernest H.	Coy
Kelly, M. D.	Lonoke
Newsom, W. H.	Louann
Scruggs, G. W.	Humnoke
Smith, Harry B.	Keo
Sonthall, S. A.	Stinnett, Texas
Street, H. N.	Lonoke
Thibault, Henry	Scott
Utley, F. E.	Cabot
Ward, O. D.	England
Watson, Asa C.	Seminole, Okla.
Wells, John B.	Scott

MADISON COUNTY

Acree, W. E.	Huntsville
Dixon, C. B.	Kingston
Hill, N. J.	Hindsville
Youngblood, Fred	Huntsville

MILLER COUNTY

Beck, E. L.	Texarkana
Cargile, C. H.	Texarkana
Chace, A. E.	Texarkana
Collom, S. A.	Texarkana
Cook, J. C.	Garland
Dale, R. R.	Texarkana
Fuller, T. E.	Texarkana
Gardner, W. P.	Texarkana
Heller, H. G.	Foreman
Hibbets, Wm.	Texarkana
Howze, H. H.	Little Rock
Hunt, Preston	Texarkana
Kelly, K. M.	Texarkana
Kittrell, T. F.	Texarkana
Kosminsky, L. J.	Texarkana
Lanier, L. H.	Texarkana
Laws, C. S.	Texarkana
Lee, A. G.	Texarkana
Lennard, F. M.	Texarkana
Longino, H. E.	Texarkana
Mann, R. H. T.	Texarkana
Middleton, B. C.	Texarkana
Murry, H. E.	Texarkana
Portwood, O. F.	Senton, Texas
Robison, Jas. Travis	Texarkana
Smiley, H. H.	Texarkana
Smith, C. A.	Texarkana
Smith, J. K.	Texarkana
Smith, Wm. Decker	Texarkana
Watts, E. M.	Texarkana
Webster, H. R.	Texarkana
York, M. N.	Texarkana

MISSISSIPPI COUNTY

Barksdale, Oscar	Wilson
Caldwell, C. A.	Blytheville
Campbell, J. H.	Joiner
Crawford, H. F.	Memphis, Tenn.
Ellis, N. B.	Wilson
Grimmett, W. A.	Blytheville
Harwell, C. M.	Osceola
Hill, E. V.	Blytheville
Hosey, N. R.	Joiner
Howton, O.	Luxora
Hudson, T. F.	Luxora
Husbands, F. L.	Blytheville
Johnson, I. R.	Blytheville
Johnson, R. L.	Bassett
Lockett, J. A.	Dell
McCall, W. S.	Blytheville
Owen, Wm. M.	Armored
Polk, J. T.	Keiser
Saliba, J. A.	Blytheville
Sheddan, W. J.	Osceola
Sims, H. C.	Burdette
Smith, F. D.	Blytheville
Stevens, C. C.	Blytheville
Tidwell, J. L.	Drew, Miss.
Tipton, Paul L.	Blytheville
Usrey, Max O.	Blytheville
Washburn, A. M.	Blytheville
Wilson, C. E.	Blytheville

MONROE COUNTY

Boswell, W. L.	Clarendon
Bradford, T. B.	Toone, Tenn.
Bradley, W. T.	Blackton
Darnall, Ernest	Holly Grove

MONROE COUNTY—Continued

Dunklin, A. J.	Clarendon
Gilbrech, Arthur H.	Clarendon
Houston, Matt. F.	Hamburg
McKnight, C. H.	Brinkley
McKnight, E. D.	Brinkley
Murphy, F. T.	Brinkley
Murphey, N. E.	Clarendon
Stout, L. H.	Brinkley
Terry, P. E.	Holly Grove
*Thomas, P. E., Sr.	Clarendon

MONTGOMERY COUNTY

Freeman, W. D.	Mount Ida
McFadden, J. C.	Mount Ida
McLean, J. H.	Caddo Gap
McLean, J. W.	Caddo Gap
Robbins, J. D.	Oden
Simpson, L. A.	Norman
Stueart, J. B.	Norman

NEVADA COUNTY

Buchanan, A. S.	Prescott
Buchanan, G. A.	Prescott
Chastain, J. S.	Prescott
Dickey, A. B.	Prescott
Hesterly, J. B.	Prescott
Hesterly, S. J.	Prescott
Hirst, O. G.	Prescott
McDaniel, Thos. W.	Boughton
Mendenhall, T. J.	Rosston
Nelms, C. F.	Laneburg
Pool, W. B. H.	Bodcaw
*Rice, W. W.	Prescott

OUACHITA COUNTY

Byrd, E. J.	Camden
Early, C. S.	Camden
Jameson, J. B.	Camden
McGill, S. D.	Camden
McRea, W. T.	Borger, Texas
Partee, Norf G.	Stephens
Powell, B. V.	Camden
Purifoy, W. A.	Chidester
Rinehart, J. S.	Camden
Robins, R. B.	Camden
Rushing, J. L.	Chidester
Sanders, Geo. P.	Stephens
Thompson, H. F.	Bearden
Thompson, J. S.	Stephens
Thompson, S. A.	Stephens
Word, N. S.	Camden

PHILLIPS COUNTY

Altman, G. G.	Helena
Baker, J. P.	West Helena
Bean, J. W.	Marvell
Brown, E. T.	Lexa
Bruce, W. B.	Marvell
Butts, J. W.	Helena
Cox, Allen E.	Helena
Cox, Aris W.	Helena
Ellis, J. B.	Helena
Eubanks, G. W.	Wabash
Fink, M.	Helena
Henry, Morris	Helena
King, J. A.	Mellwood
King, W. C.	Helena
Kultgen, Edward	Elaine
Nichols, J. W.	Helena
Norton, Earl F.	Marvell
Orr, W. R.	Helena
Rightor, H. H.	Helena
Russwurm, W. C.	Helena
Storm, Geo. R.	West Helena

POLK COUNTY

Fletcher, T. M.	Mena
Hawkins, B. H.	Mena
Hilton, J. G.	Mena
Johnson, C. F.	Hatfield
Lee, F. A.	Vandervoort
Mullins, F. C.	Wicks
Vandiver, W. C.	Mena
Watkins, P. R.	Mena

POPE COUNTY

Berryman, L. D.	Russellville
Brooke, Hugh C.	Dardanelle
Campbell, J. M.	Russellville
Cowan, Riley	London
Drummond, H. S.	Russellville
Haney, A. C.	Russellville
Jean, R. M.	Pottsville
Mason, E. C.	Quebeck, Tenn.
Mason, Walter Lee	Atkins
Miller, J. W.	Gum Log
Montgomery, W. A.	Atkins
Ross, C. J.	Dover
Scarlett, Wm. P.	Russellville
Smith, R. L.	Russellville

*Deceased.

POPE COUNTY—Continued

Stanford, J. M.	Russellville
Tate, A. B.	Atkins
Webb, G. C.	Russellville
Wright, Jerome	Russellville
Yates, G. W.	Scottsville

PRAIRIE COUNTY

Adams, Edward	DeValls Bluff
Crockett, W. H.	Biscoe
Crow, L. M.	Des Arc
Ellis, C. S.	Lonoke
Gilliam, J. C.	Des Arc
*Hipolite, F. A.	DeValls Bluff
Lynn, J. R.	Hazen
Parker, Jas.	DeValls Bluff
Parker, Luke	DeValls Bluff
Porter, T. G.	Hazen
Wilson, Jno. G.	Ulm

PULASKI COUNTY

Allen, Hoyt R.	Little Rock
Arkebauer, C. A.	Little Rock
Bailey, W. E.	Little Rock
Barlow, M. J.	North Little Rock
Barrett, Jos. E.	Little Rock
Barrier, L. F.	Little Rock
Bathurst, Wm. R.	Little Rock
Bennett, B. A.	Little Rock
Blakely, R. M.	Little Rock
Bradley, F. S.	Berea, Ky.
Bond, S. P.	Little Rock
Brooks, C. M.	Little Rock
Browning, H. W.	Little Rock
Burns, W. M.	North Little Rock
Calcote, R. J.	Little Rock
Caldwell, Robert	Little Rock
Carruth, O. A.	Little Rock
Carruthers, F. W.	Little Rock
Cazort, Alan G.	Little Rock
Cheairs, D. T.	Little Rock
Cheesnut, C. R.	Little Rock
Coon, A. B.	Little Rock
Cosgrove, K. W.	Little Rock
Crawford, J. B.	Little Rock
Crawford, S. R.	Little Rock
Cull, S. T. W.	Little Rock
Cummins, Bryce	Little Rock
Cunningham, J. C.	Little Rock
Daly, M. G.	Little Rock
Darnall, R. F.	Little Rock
Davis, E. N.	Little Rock
Day, E. O.	Little Rock
Delaney, J. P.	Little Rock
Dibrell, Jno. R.	Little Rock
Dickinson, M. F.	Little Rock
Dishongh, Howard A.	Little Rock
Dunaway, W. C.	Little Rock
Eubanks, R. M.	Little Rock
Fly, T. M.	Little Rock
Freedman, Theo.	Little Rock
Fulmer, S. C.	Little Rock
Fulmer, P. M.	Little Rock
Gallaher, Geo. L.	Little Rock
Gann, Dewell, Jr.	Little Rock
Garrison, C. W.	Little Rock
Gray, A. F.	Little Rock
Gray, Oscar	Little Rock
Gray, W. E.	Little Rock
Higgins, Homer A.	Little Rock
Hinkle, S. B.	Little Rock
Hoge, S. F.	Little Rock
Holmes, G. M.	Little Rock
Howell, A. R.	North Little Rock
Howell, Stacy C.	Little Rock
Hudson, E. M.	Little Rock
Humphreys, Lincoln	U. S. Navy
Hurrl, F. E.	Little Rock
Hyatt, D. T.	Little Rock
Jackson, Geo. F.	Little Rock
Jewell, I. H.	Paris
Johnston, E. E.	Little Rock
Jones, Granville L.	Little Rock
Jones, H. F. H.	Little Rock
Jones, Horace C.	Little Rock
Jones, I. J.	Little Rock
Jones, J. E.	Little Rock
Jones, O. O.	Monroe, La.
Jones, W. E.	Little Rock
Judd, O. K.	Little Rock
Junkin, S. P.	R. 4, Little Rock
Kennedy, Jas. Wm.	Philadelphia, Pa.
Kilbury, M. J.	Little Rock
King, Robt. R.	Monticello
Kinsworthy, J. H.	Little Rock
Kirby, A. C.	Little Rock
Kory, R. C.	Little Rock
Kriesel, W. A.	Little Rock
Lamb, W. A.	Little Rock
Lenow, Jas. H.	Little Rock
Lewis, Geo. V.	Little Rock

PULASKI COUNTY—Continued

Linzy, J. R.	North Little Rock
McAdoo, H. W.	North Little Rock
McCaskill, M. E.	Little Rock
McCormack, G. A.	Little Rock
McKinney, A. T.	Little Rock
McLaughlin, O. J.	Hot Springs
McRae, W. M.	Little Rock
Mahoney, P. L.	Little Rock
March, C. J.	Fordyce
Matthews, W. M.	Little Rock
May, C. B.	Little Rock
May, W. S.	Little Rock
May, Jno. R.	Roland
Meek, Edward	Little Rock
Melson, O. C.	Little Rock
Miller, W. H.	Little Rock
Moore, G. C.	Little Rock
Moore, R. B.	Little Rock
Oates, Charles E.	Little Rock
O'Connor, F. J.	Little Rock
Ogden, M. D.	Little Rock
Parmley, L. V.	Jerome
Patterson, R. Q.	Little Rock
Pemberton, E. M.	Little Rock
Pettus, C. S.	Little Rock
Ponder, E. T.	Little Rock
Pryor, R. E.	Little Rock
Reagan, G. W.	Little Rock
Reagan, L. D.	Little Rock
Reed, C. C.	Little Rock
Rhinehart, B. A.	Little Rock
Rhinehart, D. A.	Little Rock
Riegler, N. W.	Little Rock
Robinson, F. C.	Little Rock
Roe, Joseph	Little Rock
*Rose, W. D.	Little Rock
Runyan, J. P.	Little Rock
Sanderlin, J. H.	Little Rock
Saxon, R. L.	Little Rock
Scarborough, J. I.	Little Rock
Scott, Homer	Little Rock
Shearer, W. F.	Little Rock
Sheppard, J. P.	Little Rock
Shipp, A. C.	Little Rock
Shuffield, Jos.	Little Rock
Smith, Morgan	Little Rock
Smith, W. F.	Little Rock
Snodgrass, W. A.	Little Rock
Spitzberg, Irving J.	Little Rock
Strauss, A. W.	Little Rock
Summers, J. A.	North Little Rock
Switzer, D. M.	North Little Rock
Thomas, P. E., Jr.	Little Rock
Thompson, G. D.	Little Rock
Vaughan, Milton	Little Rock
Villars, H. F.	North Little Rock
Vinsonhaler, Frank	Little Rock
Walt, D. C.	Little Rock
Wassell, C. McA.	Columbia, La.
Watkins, Anderson	Little Rock
Watkins, John G.	Little Rock
Wayman, A. K.	Little Rock
Wayne, J. R.	Little Rock
Webb, V. T.	Little Rock
White, E. H.	Little Rock
White, L. W.	San Antonio, Texas
Wilkes, E. H.	Little Rock
Williamson, C. S.	Green Bay, Wis.
Wilson, Paul W.	Huttig
Witt, C. E.	Little Rock
Wyers, R. E.	Patton, Calif.
Zell, A. M.	Little Rock

RANDOLPH COUNTY

Bayan, Chas. E.	Pontiac, Mich.
Brown, J. W.	Pocahontas
Carrens, J. S.	Success
Finney, Clarence	Maynard
Hamil, W. E.	Pocahontas
Hughes, W. E.	Pocahontas
Hull, Henry B.	Mammoth Spring
Johnson, R. R.	Rt. 1, Walnut Ridge
Johnson, T. Z.	Pocahontas
Loftis, Jno. R.	Pocahontas
Pace, L. R.	Pocahontas
Ryburn, James W.	Manson

SALINE COUNTY

Blakely, M. M.	Benton
Buckley, E. A.	Bauxite
Buffington, T. E.	Benton
Burks, J. A.	Benton
Davis, W. S.	Owensville
Gann, Dewell, Sr.	Benton
Jeffery, V. J.	Fort Smith
Jones, C. W.	Benton
Steed, C. J.	Gurdon
Walton, Chas. R.	Augusta, Ga.
*Walton, J. W.	Benton
Ward, W. W.	Alexander
Wright, J. D.	Mabelvale

SCOTT COUNTY

Bevill, Cheves	Waldron
Duncan, B. W.	Parks
Duncan, F. R.	Waldron
Duncan, L. D.	Waldron
Jones, Paul	Mound Valley, Ks.
Sorrell, L. B.	Waldron

SEARCY COUNTY

Cotton, J. O.	Leslie
Daniel, Sam G.	Marshall
Dickens, G. W.	Leslie
Fendley, E. G.	Leslie
Heard, W. W.	Marshall
Henley, J. A.	Marshall
Leslie, J. O.	Marshall
Melton, A. S.	Marshall
Moore, W. T.	Everton
Pate, John C.	Big Flat
Roberts, E. E.	Gilbert
Rogers, Wm. F.	St. Joe
Wood, E. W.	Marshall

SEBASTIAN COUNTY

Benefield, C. E.	Fort Smith
Benefield, J. H.	Fort Smith
Bevill, S. D.	Fort Smith
Billingsley, C. B.	Fort Smith
Blair, A. A.	Fort Smith
Brooksher, W. R., Jr.	Fort Smith
Buckley, J. H.	Fort Smith
Bungart, C. S.	Fort Smith
Carney, Andre B.	Clarksdale, Miss.
Chapman, A. S.	Fort Smith
Coffman, J. S.	Lavaca
Cooper, St. Cloud	Fort Smith
Dorente, D. R.	Fort Smith
Dorsey, H. C.	Fort Smith
Eberle, Walter G.	Fort Smith
Foltz, Jas. A.	Fort Smith
Foster, M. E.	Fort Smith
Freer, B. W.	Fort Smith
Gardner, Lycurgus	Fort Smith
Goldstein, D. W.	Fort Smith
Hall, Chas. W.	Greenwood
Harvey, John H.	Fort Smith
Hoge, A. F.	Fort Smith
Holt, C. S.	Fort Smith
Hynes, Geo. F.	Fort Smith
Jeffery, T. E.	Fort Smith
Johnson, Hugh	Fort Smith
Johnson, Jas. Edward	Fort Smith
Jones, E. B.	Hartford
Jones, I. Fulton	Fort Smith
Kennedy, C. H.	Fort Smith
King, H. C.	Fort Smith
Little, J. E.	Fort Smith
McCormack, N. D.	Fort Smith
Means, C. S.	Fort Smith
Moulton, E. C.	Fort Smith
Moulton, Herbert	Fort Smith
Redman, Pierre P.	Fort Smith
Riddler, P. A.	Fort Smith
Rose, Willis F.	Fort Smith
Smith, H. H.	Fort Smith
Southard, J. D.	Fort Smith
Southard, J. S.	Fort Smith
Stubbs, S. P.	Fort Smith
Taylor, J. M.	Fort Smith
Thompson, H. B.	Fort Smith
Ware, Bertram L.	Greenwood
Wilson, Cons P.	Fort Smith
Wolferrmann, S. J.	Fort Smith
Woods, G. G.	Huntington
Wyatt, R. B.	Fort Smith

SEVIER COUNTY

Archer, C. A.	DeQueen
Baird, W. G.	Dierks
Clingan, A. J.	DeQueen
Dickinson, R. C.	DeQueen
Graves, J. C.	Lockesburg
Hendricks, J. S.	DeQueen
Hendrix, B. E.	Gillham
Hopkins, R. L.	DeQueen
Kennedy, J. R.	DeQueen
Kitchens, C. E.	DeQueen
Norwood, M. L.	Lockesburg

ST. FRANCIS COUNTY

Biggs, J. M.	Heth
Bogart, J. A.	Forrest City
Boggan, P. P.	Forrest City
Brown, J. T.	Forrest City
Caldwell, A. B.	Caldwell
Chaffin, E. J.	Hughes
McClendon, H. L.	Palestine
McCown, N. C.	Forrest City
McDougal, J. F.	Forrest City
Powell, Clyde V.	Round Pond
Proctor, F. L.	Forrest City
Rush, J. O.	Forrest City
Winter, W. A.	Widener

*Deceased.

UNION COUNTY		
Bush, T. J.	El Dorado	
Cathey, A. D.	El Dorado	
Colvin, A. R.	Strong	
Cullins, Jno. G.	New York, N. Y.	
DeBolt, G. C.	El Dorado	
Elkins, W. N.	Junction City	
Engle, C. G.	El Dorado	
Falvey, J. C.	El Dorado	
Ferguson, J. V.	El Dorado	
George, I. M.	El Dorado	
Guthrey, J. E.	El Dorado	
Harper, Wm. L.	Junction City	
Hastings, Gordon	El Dorado	
Irby, Frank L.	Wesson	
Levine, David	El Dorado	
Mahony, F. O.	El Dorado	
Mayfield, A. M.	El Dorado	
McGraw, S. J.	El Dorado	
McMath, J. T.	Strong	
Mitchell, J. G.	El Dorado	
Moore, J. A.	El Dorado	
*Morgan, T. M.	El Dorado	
Munn, E. J.	El Dorado	
Murphy, Geo. D.	El Dorado	
Murphy, G. W. T.	Strong	
Niehuss, H. H.	El Dorado	
Nolan, J. W.	El Dorado	
Patterson, W. L.	El Dorado	
Purifoy, L. L.	El Dorado	
Rowland, E. F.	El Dorado	
Rowland, Robt. E.	El Dorado	
Russell, M. V.	El Dorado	
Sheppard, J. K.	El Dorado	
Sheppard, J. M.	El Dorado	
Slaughter, J. Henry	Norphet	
Slaughter, J. W.	El Dorado	
Smith, J. M.	Smackover	
Tanner, J. F.	El Dorado	
Tarver, Vernon	Huttig	
Thrower, W. W.	El Dorado	

UNION COUNTY—Continued		
Vines, F. P.	El Dorado	
Wharton, J. B.	El Dorado	
White, D. E.	El Dorado	
Wozencraft, W. L.	El Dorado	

WASHINGTON COUNTY		
Bean, J. L.	Fayetteville	
Briley, J. H.	Springdale	
Callen, C. B.	Fayetteville	
Callen, L. H.	Fayetteville	
Cannon, J. S.	West Fork	
Cooper, T. L.	Elm Springs	
Curry, Wm.	Cane Hill	
Ellis, E. F.	Fayetteville	
Gilbert, A. A.	Fayetteville	
Gregg, A. S.	Fayetteville	
Harr, H. T.	Fayetteville	
Hathcock, P. L.	Fayetteville	
Henry, R. T.	Springdale	
McCormick, E. G.	Prairie Grove	
Martin, J. E.	Springdale	
Mock, W. H.	Prairie Grove	
Moore, A. I.	Fayetteville	
Morrow, F. R.	Fayetteville	
Paddock, C. B.	Fayetteville	
Roberts, D. C.	Fayetteville	
Sisco, C. P.	Springdale	
Swift, Chas. E.	Elkins	
Walker, J. W.	Fayetteville	
Wallace, Jno. M.	Fayetteville	
Wood, H. D.	Fayetteville	

WHITE COUNTY		
Abington, E. H.	Beebe	
Abington, W. H.	Beebe	
Allbright, S. J.	Searcy	
Brewer, T. E.	Beebe	
Clark, W. A.	Bald Knob	
Felts, W. R.	Judsonia	
Hardy, F. P.	Center Hill	
Harrison, A. G.	Searcy	

WHITE COUNTY—Continued		
Hassell, J. W.	Searcy	
Havner, J. B.	Beebe	
Hudgins, A. H.	Griffithville	
Jones, J. L.	Searcy	
Little, R. L.	Judsonia	
McAdams, J. C.	Pangburn	
Moore, L. E.	Searcy	
Parker, Orle	Searcy	
Peeler, C. M.	Pangburn	
Purnell, F. L.	Kensett	
Runyan, J. R.	Searcy	
Sloan, Dewey W.	Beebe	
Sloan, J. R.	Garner	
Spain, A. L.	Letona	
Tapscott, S. T., Jr.	Searcy	

WOODRUFF COUNTY		
Biles, L. E.	Augusta	
Brewer, E. F.	Augusta	
Brewster, B.	McCrory	
Brown, E. B.	Cotton Plant	
Daniels, F. E. P.	Gregory	
Dungan, C. E.	Augusta	
Finch, Carl	McCrory	
Fraser, R. L.	McCrory	
Gephart, R. T.	Cotton Plant	
Hancock, W. G.	Cotton Plant	
Hays, J. F.	McCrory	
Maguire, F. C.	Augusta	
Morris, J. W.	McCrory	
Porter, M. A.	Hunter	
Smith, R. N.	Augusta	
West, J. H.	Grays	

YELL COUNTY		
Britt, H. A.	Havana	
Gillum, A. D.	Rover	
Linzy, C. B.	Plainview	
Montgomery, H. L.	Gravelly	
Pool, T. J.	Ola	

Obituary

RICE, WILLIAM W.—Dr. W. W. Rice of Prescott died October 29, 1928. Aged 60.

Dr. Rice had practiced medicine in Prescott for thirty years and had been coroner, president of the Nevada County Medical Society and a member of the City Board of Health.

He is survived by his widow and sisters, Mrs. J. J. Young of Okolona and Mrs. Zena Lassetter of Los Angeles, Calif.

THOMAS, PHILLIP E., SR.—Dr. Phil Thomas, Sr., of Clarendon, died October 31, 1928. Aged 72. Dr. Thomas died at the home of his daughter, Mrs. Richard Mayo, Little Rock. Interment was in Little Rock.

He is survived by his widow; four sons, Dr. Phil Thomas, Jr., of Little Rock, and Clarence Albert and William Thomas of Clarendon; three daughters, Mrs. Mayo of Little Rock, Mrs. Mabel Leon of Denver, Colo., and Miss Eva Thomas of Clarendon.

County Societies

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in public session at Louann, the night of September 6, 1928.

The meeting was held at the Louann High School, where the citizens of the town served a bountiful barbecue supper before the speaking program.

The speakers were: Dr. C. W. Garrison, State Health Officer, who discussed public health problems, and Dr. Paul H. Power of Pine Bluff, whose topic was "Co-operation of the Mother With the Physician in the Prevention and treatment of Infectious Diseases in Children."

About three hundred people attended this meeting, which was the first public meeting the society has ever held.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular session at the Camden Chamber of Commerce on Thursday night, October 4, 1928.

Physicians attending the meeting were: Robins, Rinehart, Early, McGill, Jameson,

Wooldridge, Purifoy, Rushing, Whaley, Davis, Hathecock, Evans, Sanders and Strange.

The program consisted of the showing of a medical motion picture on "The Diagnosis and Treatment of Infections of the Hand." It was a very instructive and entertaining picture.

The next meeting will be held November 1st, at the Camden Hospital, and will be a combined meeting of the physicians, nurses, and board of directors of the hospital.

Book Reviews

Nerve Tracts of the Brain and Cord.—Anatomy, Physiology, and Applied Neurology. By William Keiller, F. R. C. S., Ed., Professor of Anatomy and Applied Anatomy, University of Texas. Published by The MacMillan Company, New York, 1927. Price, \$8.00.

This book is written in such a way as to furnish a good working scientific basis for an intelligent understanding of the symptomatology and diagnosis of those nervous diseases that come within the domain of the general practitioner.

Syphilis.—A Treatise on Etiology, Pathology, Symptomatology, Diagnosis, Prognosis, Prophylaxis, and Treatment. By Henry H. Hazen, A. M. M. D., Professor of Dermatology and Syphilology, Medical Department of Georgetown University; Author of "Diseases of the Skin," "Cancer of the Skin," etc. Second Edition, with 165 illustrations, including 16 Figures in Colors. Published by The C. V. Mosby Company, St. Louis, 1928.

In this revision the author has made a strict survey of the problem which he had to deal with and by close study has overlooked nothing, to the smallest details in bringing it up to date throughout. It covers the whole field in an authoritative way.

We quote an important point that Dr. Hazen mentions in regard to treatment, "There is a general tendency to start a course of treatment for the late syphilitic with mercury and perhaps the iodides. Then arsphenamine can be employed. The alleged advantages of this system are: There is less danger of a neuro-recurrence, and the liver and myocardial heart are spared some possible dangers."

Getting Well and Staying Well.—A Book for Tuberculous Patients, Public Health Nurses and Doctors. By John Potts, M. D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium. Published by The C. V. Mosby Company, St. Louis, Mo. Price, \$2.00.

This book is written in the hope that it will aid patients, nurses and physicians in learning where their personal responsibility begins and where it ends. As Dr. McKnight says in

his introductory remarks, "The author is a good philosopher, free from exaggeration, and a valiant warrior against ignorance, fatalism, and quackery."

Tobacco and Physical Efficiency.—A Digest of Clinical Data, with Annotated Bibliography. By Pierre Schrumpe-Pierron, M. D., Professor of Clinical Medicine, University of Cairo. Published by Paul B. Hoeber, Inc., 76 Fifth Avenue, New York. Price, \$1.85.

In the preface of the book written by Henri Vaques, M. D., Professor of Medicine, University of Paris, we wish to quote:

"If the experiments to determine the affects of tobacco have not been conclusive, they have at all events given us a knowledge of nicotine, a substance whose toxic influence upon the heart is very remarkable; and that knowledge is something worth having. It appears that tobacco cannot be freely indulged in without injury to the normal action of that organ.

Regarding the part played by tobacco in the causation of lesions of the circulatory system the conclusions are not as yet precise, due evidently to the fact that the plant has not the same effects on animals as on man.



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(Adv.)

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Original Articles

DRAINAGE OF INFECTED WOUNDS*

MAHLON D. OGDEN, M. D.
Little Rock

To paraphrase a saying of the late John B. Murphy, it is about time to discuss again the question of surgical drainage.

Twenty-two years ago Yates (1) carefully reviewed the subject of peritoneal drainage from the time of Hippocrates and showed conclusively by original experiments that (1) it is impossible to drain the general peritoneal cavity, (2) drains with smooth surfaces are more effective than drains with rough surfaces, (3) pus will not drain through gauze.

Omitting consideration of the pleural cavities and the various hollow organs such as the intestines, urinary bladder, gall-bladder, etc., a survey of the present-day literature on the drainage of infected wounds shows no uniformity of practice among surgeons and, in most articles, the mention of the material used is quite casual.

Drainage tubes of rubber are often used, some large, some small, some hard and some soft, and most of them have perforations at several points to allow the ingress of the wound secretion, the assumption being that the discharge reaches the surface of the wound through the lumen of the tube.

For small wounds, many writers mention the use of silkworm-gut, multiple strands of which are used simply as leads to guide the secretions to the surface.

Rubber tissue and rubber dam seem to be gaining in popularity and one finds increasing mention of these materials rolled into wicks without gauze and Robinson (2) advises that this rubber wick be perforated at intervals with a punch to allow the ingress of

fluid, which is then removed by capillarity between the folds of tissue.

It is my impression, however, from actual observation and from scanning the current literature, that the cigarette drain is perhaps the most popular of all materials at the present time. The cigarette drain is a wick of gauze about which is rolled rubber dam or tissue. Directions for its manufacture vary. Some advise that a tuft of gauze be allowed to protrude from the end, others that it be cut off smoothly and still others that the rubber covering be perforated at intervals.

Glass tubes are seldom mentioned nowadays, but the admonition is still occasionally found to insert a small wick of gauze for drainage.

Without reviewing minutely the pathology of inflammation, it will be profitable to outline briefly here some of the essential phenomena which are factors in the present problem.

The response of tissues to a bacterial injury consists, among other things, of the outpouring of tissue fluids known variously as lymph, plasma, etc., and the migration of various wandering cells to the injured area. If by lymph we mean the fluid contained within the lymphatic system, the term plasma would probably be more appropriate as a designation for this inflammatory fluid, which is generally regarded as passing through the walls of the dilated blood capillaries in the vicinity and from the tissue spaces. The lymph vessels do not open directly into the tissue spaces by means of stomata, as was once taught, but the system is a closed one, lined completely by endothelium and there is no scientific evidence that a reversal of the lymph flow occurs at any time, due either to inflammation or to the stimulus of introduced foreign bodies.

The blood plasma, under normal conditions, makes its way through the thin walls of the capillaries, diffuses through the tissues and into the lymph vessels, and this flow may be

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

altered by the changes in capillary pressure or in the composition of the blood or by pathological changes in the tissues, thus disturbing the normal osmotic currents.

An abscess is an inflammatory area in which the exudate, consisting usually of plasma, fibrin, necrotic tissue and bacteria, is confined. With the release of the pressure, the contents of the abscess are extruded and healing progresses after the usual manner in inflammations by the formation of granulation tissue in the abscess wall, with the gradual obliteration of the cavity and with ultimate replacement of the granulation tissue by cicatricial tissue.

Following the opening of the abscess and the release of pressure, there then ensues a continuous flow of fluid containing tissue cells, pus, enzymes, etc. The solid necrotic tissue liquefies under the influence of enzymes (the source of which is not necessary to discuss here), and is discharged from the wound by reason of the contraction of the cavity incident to healing, by muscular action in some parts of the body and by the vis a tergo of the oncoming fluid from the tissue lining the cavity wall. Reduced to its smallest terms, the only function of a drainage material should be to act as a lead to guide these fluids to the outside and to maintain an opening until healing takes place so that the abscess contents cannot reaccumulate under pressure. Nature has provided stimuli in the form of fibrin, necrotic tissue and bacteria to cause sufficient secretion of this wound plasma and it is not necessary to introduce into the wound any irritative material such as gauze for the purpose of increasing this flow. To do so might well be compared to the application of a mustard plaster to a burn.

The ideal drainage material then should be one which is non-irritating, which provides an unobstructed passage to the outside and which by capillarity or suction removes the wound secretions. Such a material has not yet been found.

RUBBER TUBES

The lumen and perforations of rubber tubes are blocked very readily by granulation tissue and omentum and, after a little while, drain practically not at all through the lumen, but act as encapsulated solid foreign bodies, around the periphery of which the abscess fluid finds its way to the surface. In addition to this there is the well-recognized danger that a stiff tube, in contact with the intestinal

wall is very liable to produce perforation and fecal fistula. The same ill effects of pressure of rubber tubing are recognized when it is placed against large blood vessels, and necrosis of the common iliac artery has been caused by a tube inserted down to the ureter.

GAUZE

When a wick of gauze is inserted into a suppurating cavity, it acts as a drain by capillarity for the first few hours only. After that time the interstices become clogged and then it acts as a drain in the same manner as non-absorbent material, with several marked disadvantages. In the first place, it is holding in its meshes a large quantity of infective material and is a favorable field for bacterial proliferation. It even acts occasionally as a plug causing the abscess contents to reaccumulate under pressure, especially when granulations have grown into it, though this is not the case when the cigarette drain is used; and again, it is an irritative foreign body introduced into a wound that is attempting to heal and which is already sufficiently stimulated to this healing by the presence of fibrin, necrotic tissue and bacteria.

A gauze wick, then, with or without a rubber covering, has the same drainage capacity as a solid cylinder of the same dimensions; that is, it serves solely as a guide to direct the flow of purulent material to the outside by keeping the wound edges apart and its capacity as a drain varies directly as its perimeter.

If gauze were the proper material to introduce into an appendiceal abscess, it should also be the proper material to use as a precautionary drain introduced down to a ligated cystic duct following cholecystectomy or to the suture line of a colon resection; but I do not know of its being so employed.

Eastman (3) utilizes the deleterious effects of gauze on tissue by introducing a tufted cigarette drain, extraperitoneally to an appendiceal abscess, leaving it in contact with the abscess wall which, after forty-eight hours, ruptures and the abscess is evacuated alongside the drain.

When Carrel (4) was developing his technique for the sterilization of wounds he soon found that it was impractical to interpose gauze between his tubes and the wound tissue as the gauze did not allow the Dakin solution to penetrate it after the first few hours. In his final technique therefore the tubes are laid directly upon the wound and the gauze upon the tubes.

It might be contended that too much space is here devoted to the condemnation of gauze as a drain, inasmuch as its popularity as such has greatly diminished with the years. However gauze still has some earnest advocates and Kennedy (5) even goes so far in defense of his method as to say that the discarding of gauze as a drain is due to the use of rubber gloves in surgery, as the gloves so impair the tactile sense, that infectious foci cannot be removed from the abdomen and I do know that a certain number of men follow his teaching.

Payne (6) has written one of the most rational articles on drainage in recent years and advocates the use either of the cigarette drain or of rolled rubber tissue alone. When sloughing of tissue or fecal fistula occurs he removes the drains and replaces them with clean ones. He advises gentle irrigation, under very low pressure through a small soft catheter around the drain in those cases having thick solid discharges, and he also believes that drainage takes place about rather than through the drainage material.

I abandoned gauze and cigarette drains many years ago, replacing them with rolled rubber tissue. Following the introduction of Carrel's technique with Dakin's solution, I often introduced with the rubber tissue a Carrel tube, which led to the development of the present device.

A strip of rubber dam four cm. wide is attached at its center to the side of a soft rubber tubing five mm. in diameter by rubber cement. This forms a soft rubber tube with two attached fins, each two cm. wide, and gives a total perimeter of nine cm. to the finished drainage tube. This is ample for all but the most extensive wounds and, by trimming off some of the fin, it can be adapted to smaller wounds.

To illustrate its use in a case of suppurative appendicitis: The usual incision is made into the abscess cavity and the appendix removed, or not, according to the judgment of the operator. Then a section of this finned tube is introduced to the most dependent part of the abscess cavity from which it extends three or four inches beyond the skin surface. The wound is sutured with the exception of an adequate drainage aperture through which this tube protrudes and is dressed with gauze wet with Dakin's solution. The wound is allowed to remain undisturbed for forty-eight hours at which time the dressings are removed, when they will be found to have absorbed a

varying amount of purulent secretion. Irrigation with Dakin's solution through the tube, either at two-hour intervals or with a continuous drip, is then begun. The forty-eight hour interval is to allow the encircling adhesions to become firm.

The Dakin's solution passes in through the tube to the depths of the wound, rises outside the tube with the wound secretion and is conducted by means of the fins to the surface where it is taken up by the dressings. This tube is, of course, not adapted to the drainage of hollow organs nor of the pleural cavity where a tight joint is desirable, as its purpose is to prevent the joint from becoming tight; but it is adapted to the drainage of practically all other parts of the body, such as perirenal, pelvic, appendiceal, osteomyelitic and other abscesses or conditions where rubber tissue, rubber tube or cigarette drains are now used.

The tube itself is not a drainage tube, but is an irrigation tube with the advantage that the irrigation is retrograde, which is to say that it is in the same direction as the normal flow of wound discharge. The fins, of course, function only as drains and rubber dam is the least irritative material I have been able to find with the possible exception of paraffin which does not possess the requisite tensile strength for this purpose. Rubber dam is superior to rubber tissue as its greater strength lessens the chances of fragments being left behind in the wound upon withdrawal of the drain.

Obviously one would not use this drain in very small wounds, nor as a precautionary drain, nor in situations where a small strip of rubber dam alone suffices; but it can be used wherever a drain of this size is desired, even though irrigation is not employed.

This drain is easily manufactured by any operating room force, along with their sponges and other supplies. A strip of Carrel tubing and a strip of rubber dam two inches wide are roughened with emery paper, spread with a thin line of rubber cement and glued together. It is then allowed to dry, when it is boiled or autoclaved and stored in antiseptic solution, usually Harrington's, whence it is removed as needed, washed in sterile water and handed to the surgeon. The tip of the tube is placed in the deepest part of the abscess cavity and led out through the incision which is closed down to the tube, leaving sufficient room to avoid constriction. As many

tubes can be used as there are cavities to drain though it is occasionally possible to lead the tube from one cavity through another to the outside. It is left in as long as the judgment of the surgeon dictates. It is possible in this way to obtain adequate drainage and at the same time avoid large openings in the incision with their liability to subsequent hernia.

By its use with hypochlorite solution, wound healing is hastened, disagreeable odors are minimized or abolished, reinfection from the surface is obviated as the current is ever outward and routine dressings are not nearly so irksome to patient or surgeon. It is not a perfect drain, but is, I believe, superior to the cigarette and to rolled rubber tissue alone.

SUMMARY

Abscesses contain necrotic tissue, fibrin and bacteria which are sufficient stimuli for the production of wound secretion. Irritant foreign bodies introduced for this purpose are therefore unnecessary and harmful.

Rubber tubes are unsuitable drainage materials and often produce ill effects by pressure.

Gauze drains only slightly by capillarity, harbors infective material, is irritating, and after the first few hours drains only around its periphery.

Cigarette drains are less objectionable than gauze alone, but are far from ideal.

Rubber dam alone is the best available drainage material at this time and its use when combined with a small retrograde irrigation tube affords the most rational method of hastening the healing of infected wounds.

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DISCUSSION

DR. J. S. Rinehart, Camden: I was very much interested in this subject of drainage. Many years ago I heard Dr. John B. Murphy state that we ordinarily put in surgical cases drains, which drain about like a stopper, permits drainage from a bottle. He says to remove the tension where there is infection; if you remove the tension, then you have egress.

I believe the time is coming when there will be very little put into a suppurating wound. The

principle is to remove all tension from the infection. Then, where it is possible to utilize gravity, the offending material in the wound will find its way to the outside world. It is probably from the mechanical effect that the Dakin solution and irrigation has become popularized. I don't believe that an antiseptic solution down into the wound will kill the infection. It will seldom ever reach the bacteria that is causing this infection. After the bacteria leaves the tissues and has formed into pus and debris, then your Dakin solution will help get behind it, force it out and get it out of the road. I believe there's so much change of drainage methods, because we have no suitable or satisfactory method. I think it will boil itself right down to this: that if you relieve the tension where there is pent-up infection and where it is possible in many cases to seek the assistance of gravity, we have the infection taken care of and Nature will do the healing. (Applause)

DR. F. WALTER CARRUTHERS, Little Rock: This covers a very broad subject, therefore, I feel that I should say something about drainage of infected conditions in bone. Dr. Rinehart suggested a thought to my mind, viz., are we going to get away from drainage of infected wounds?

About a year ago, Dr. H. Winnett Orr, of Lincoln, Nebraska, read a paper before the Section on Bone and Joint Surgery and condemned the drainage of infections of bones to this extent: that in doing the radical operation of extensive osteomyelitis prior to that time (even now as far as that is concerned), we used the method of Carrel-Dakin. That method is being condemned every day and being discarded as rapidly as possible. In all my cases of acute or chronic osteomyelitis, my point is to curet them out very, very thoroughly, getting rid of all debris and infected material, and leave no drainage whatsoever, except that I do pack the wound. I do not touch that wound for fifteen to thirty days. I encase it, send patient home and have him to come back within fifteen to thirty days for dressing. I, therefore, feel that Dr. Rinehart suggested a very timely thing when he said "we are going to get away from drainage and especially the introduction of foreign material." I don't think the Carrel-Dakin method is in any way useful today as it was six, seven or eight years ago. It is discarded and it is going to be discarded more rapid than it ever has been before.

DR. OGDEN, in response: I did not take up the question of whether to drain or not to drain. That would take a special paper in itself. It was purely the question of the mechanics of drainage after it was once decided to drain. Of course, if it is decided that one should not drain, you do not drain, no matter what material you have available.

There is still a certain value in the Dakin solution. Even now we see wounds which, when we open them up, have a large amount of necrotic material in them. The Dakin solution will dissolve this necrotic material and will hasten the healing of the wound. I think that there are still cases in which the Dakin solution is indicated. It will not, as Dr. Rinehart said, kill a germ that it can't reach. It will not destroy the germs in the tissues. It removes a great deal of the material upon which the bacteria feeds. It keeps the wound clean. It will destroy an odor in an abdominal wound within twenty-four hours, and enable the patient to live more or less comfortably with himself without keeping the covers pulled up tight. (Applause).

"THE RELATION OF THE SURGEON TO THE SPECIALIST"*

E. L. BECK, M. D., Texarkana

My subject is "The Relation of the Surgeon to the Specialist." I am asking that you remember this, as it may be hard for you to recognize it later.

Could one call back fifty years and attempt to span this one-half century it would have required one of unusual flexibility of mind, or perhaps I should say a pliable or expansive imagination. You could only have spoken or written of such a condition at the risk of being called a dreamer or a fool, for who is it that could foresee such an unusual condition of progress?

The master minds of the recent age have dug deep into human anatomy, physiology and histology. They have analyzed and become familiar with the normal conditions of the body and therefore have prepared themselves for and are actually mastering the diseases that are arising daily in human life.

Our lives have been rendered happy on account of the great safe-guards and protection that have been thrown around us, making our living conditions both pleasant and safe.

The scientific branches of medicine have mounted high. Our chemical laboratories have gone far into the study of the different elements of the body, from the kidney, the blood, the spinal fluid, the sputum and from the examination of the tissues; they lay before us a picture not infallible at all times, but always meritorious and helpful if not indispensable.

Next, we have the roentgenologist with his modern thought and equipment, penetrating some of the deepest recesses of the human body, lifting into human view many secrets hitherto hidden from the eyes of scientific man to a great degree determining the fate of man. Thus we have the second picture before our eyes, and yet this is not always ample to solve the problem before us. Then comes the man well grounded and educated in anatomy, physiology, histology and especially is he educated in pathology and diseases of human kind. He has made a study of human nature. Not only does he delve deep into family and personal history, but he traces

each and every symptom or lead from its origin to its finality.

Then, as he couples his laboratory findings with that of the roentgenologist he begins to shed light on the case in question enabling him to combine his efforts with that of the man specializing or making special study of the given subject, until finally it reaches the surgeon. Then combining their surgical knowledge, they arrive at a reasonably safe conclusion. Therefore, they either do or do not, as the case may be, or whatever is done is done in the face of clear cut facts.

After ample study and investigation, by what other means can a surgeon be safe or reasonably sure of himself? You ask me and I will tell you, no, I have not always done this; in fact, we are not doing this work now to my satisfaction, but we really hope to do much better as time goes on.

If you quiz me very closely I must confess my investigations and diagnoses in days gone by have not been at all satisfactory to me, and if you insist on knowing more of it just stop and review your own work for a period of years and you will have the answer.

I would not have you think for a single moment that I would to any degree under-rate or under-value the men who have gone before us and whose skill and adaptability could scarcely be matched today. A grander, truer type of men have never trod this earth; pure in principle, noble in spirit, untiring in their efforts, ever serving humanity, not only with their skill, but daily pouring out of the fullness of their hearts to lighten the burdens of the sick with cheerfulness and to soothe the parching brow with a loving and kindly touch. I trust this will not become a lost art. Could I dare say principle? I thank God for the old doctor, I wish the passing was not to be. Could we only inherit his outstanding contributions; could we only pass down to the present and coming generations some of his whole-hearted unselfishness. With all this we find nothing in the past to compare with the achievements of the present. One of our great leaders has wisely said, "Thought is the Hercules of the Age, and his strength is equally a vigorous fact, whether it be employed in treading the lion of power or in cleaning out the Augean stables of accumulated social and professional errors, moving by nations, by races and by systems this irresistible rule."

Educated thought is setting aside old and setting up new civilizations at will. Yes, our achievements have been great, our progress

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

unparalleled. This is a day of specialties, not only is it a day of specializing in the profession, but it is a day of specializing in all lines of life, and the layman is not the last one to recognize this great need, neither is he backward in his demands. It is therefore inevitable.

Yet, as we mount to the peak of professional success and look down the road that leads to a more perfect day, we behold the red light, a signal of danger, danger in specialties. I do not refer to the helpful and contributory lines of specialties. I do not object to any kind of specializing, as it is obvious that the man who is willing to narrow his line of work and concentrate his study and efforts has a much greater measure of success to his credit and very much more to offer the public, but the thing to which I do object, or hope to see corrected, is the self-styled or self-willed type of specialist. For what does the public know about you, about your medical education or special training? Then, it is incumbent upon you, sirs, as an educated medical man, as a leader, as a true representative of your own, the noblest of all professions, to take heed to the appalling or growing evil.

At this point there is another thought that looms high above all; it is our interest in and our service to humanity. This constitutes our first and greatest obligation in life next to that of our God and our family.

I am of the opinion that every man that goes out from his medical school equipped as far as medical school and training are concerned (for the days of illegitimate medical schools are about over) should have a period of time in which to decide his specific or special line. I do not mean that he should not be permitted to practice, he should just in the same way as has been done heretofore; but before he attempts to specialize, that is to say before he can become an internist, making complicated and expert examinations before he becomes a pediatrician orthopedic surgeon, eye, ear, nose and throat, urologist, gynecologist or general surgeon, he should have some special training and have a special examination in this particular branch.

I don't mean to include such specialties as laboratories and other means of the kind. I well know that there are many good men doing exclusive work with a full degree of success who have not had the benefit of special training; but these men have made a long and strenuous application of the work and are a success because, first, they are by nature es-

pecially adapted to this; second, they have made an untiring effort to accomplish this end, not simply declaring themselves specialist, as is being done on all sides today. I would not be understood as saying that that which changes always reforms, or that every apparent triumph is a just progress. Neither can we afford to waste time and strength in defending theories and practice, however valued in its day which have been swept down by the moving avalanches of actual events. We can live neither in nor by defeated past, and if we would live in the growing conquering future, we must furnish our strength to shape its course and our will to discharge its duties. The pressing question, therefore, is not what they have been, but whither and what they shall determine to be.

THE ABUSE OF CARTHARTICS IN THE ACUTE ABDOMEN*

W. T. LOWE, M. D., Pine Bluff

So many times in the last few years, I have seen patients with acute condition in the abdomen come to be operated, whose condition, in my opinion, had been made materially worse by taking purgatives, either before a diagnosis had been made, or before the attending physician, or members of the family, one or both, decided that an operation was necessary, that I thought a study and discussion of this subject, before this body, at this time, would be very appropriate.

The term, acute abdomen, usually means conditions like acute gall-bladder disease, acute appendicitis, acute diverticulum, perforation of the intestinal tract in some place, acute pelvic disease, intussusception, obstruction of bowels, traumatism, etc.

I think a close study of the physiology of the intestinal tract will convince one that we very often give too much purgative in all conditions. Possibly too many of us, when called to see a patient with acute pain in the abdomen, especially when the diagnosis is the least bit obscure, are disposed to give a purgative and see what happens—what will result. This attitude, in my opinion, is wrong. In the presence of acute pain in abdomen, never give a purgative until a diagnosis is made and then remember there is no place for purgative in the acute abdomen.

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

A badly infected or traumatised portion of the intestinal tract, needs rest, just as much so as an infected or traumatised hand or foot. There is just as much reason for massaging an acute infected knee joint, as there is reason for giving a patient with an acute and vicious appendicitis, a strong cathartic. All tissue of any kind in any locality of the body, needs rest when it is infected or traumatised, till the cause of the trouble is removed. We can very often assist nature in removing the cause of the trouble. Members of the patient's family sometimes give purgatives before the doctor is called in. The doctor, when called in, sometimes gives more cathartic after he sees the patient, and especially may this happen if the diagnosis is rather uncertain. When these drugs are given to patients with acute conditions in the abdomen, it usually increases the nausea, if present. If nausea is not present, then the drug is very likely to produce it. If the drug is retained, the nausea is usually made worse and the resulting purging, with the patient's inability to take any fluid into his system, so dehydrates and debilitates the system, that the protective forces against infection in the body are rendered ineffective. The patient is unable to rest during this time. He usually becomes anxious and apprehensive about himself. This condition only makes bad matters worse, and it would appear that we are working against the welfare of our patient instead of helping him in his desperate condition. The result of this kind of treatment is usually to make the patient's chances of recovery less whether he is operated or not. It makes the operation a great deal more hazardous if the patient is operated. Some of them will get well without operation, it is true; but a higher percentage will get well in either case if the patient is allowed to rest instead of being given so much medicine. When these patients who have been given oil, calomel, epsom salts and other cathartics are brought to the hospital to be operated, we sometimes find their condition to be such that it is best, even when the element of time is so important to put them to bed, give them morphine to make them rest and keep them quiet awhile till we can get more fluid into the system before an operation is advisable. Sometimes it is best to treat them through the acute attack and do the operation at a later date—especially is this true of some of the

acute infectious conditions. When, after the loss of some very valuable time, during which the operation could have been done with little danger to the patient, these patients who have been given strong cathartics, are brought to a hospital for operation, we find the patient in a rather serious condition, due largely to two things: Too much purgative; the loss of valuable time. The operation is more hazardous and demands more mature and wise judgment than any condition that ever confronts the surgeon. A simple enema in the beginning of the trouble, rest and an early operation, if one is necessary, is the best and most logical treatment for these patients.

There are two acute conditions in my opinion, in which the life of the patient is very often jeopardized and sometimes placed beyond much hope of recovery by the unwise administration of purgatives in the beginning of their illness. These two conditions are the acute, vicious type of appendicitis and obstruction of the bowels. More harm can be done in the shortest length of time by giving purgatives to these patients than in any other condition I know.

In acute conditions of the abdomen, an early diagnosis is very, very important. A bicarbonate of soda enema is usually beneficial, and is the only means that should be used to produce evacuation of the bowels. If an operation is to be done, do it early and remember there is no place in the acute abdomen for drastic cathartics.

“The striking results obtained in protecting children against diphtheria by means of toxin-antitoxin and the confidence which physicians very properly have in this measure, makes it necessary at this time to utter a word of caution.

Three doses of toxin-antitoxin are followed by the development of immunity in only 85 per cent of the cases leaving 15 per cent still susceptible to diphtheria.

Physicians seeing a child having the clinical symptoms of diphtheria should not let the fact that the child has previously had three doses of toxin-antitoxin, deter them from administering diphtheria antitoxin. The antitoxin *will do no harm* if the culture proves negative, and it may mean the saving of a life. The child may be one of the non-immune 15 per cent not protected by the original course of treatment.”

THE JOURNAL

OF THE

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the state, changes of location, etc., are requested.

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CHRISTMAS

*"Christmas comes but once a year,
And when it comes it brings good
cheer."*

That is an old time couplet which the grandfathers of the present generation used to cite. Of late years it has taken on new meaning. There was a time when the observance of Christmas was less unselfish than at present. Today the Christmas spirit is more diffused. Welfare organizations, open their purses that Christmas may mean something more than "just another day" to the thousands of the poor who have difficulty in providing daily food for their families and with not a penny for toys, cakes, turkeys, pies or other good things.

The organizations referred to go systematically at the job of putting joy into desolate homes. There is at least a temporary recognition of the universal brotherhood of man and food is bountifully provided, toys and sweets are bestowed on the youngsters and Christmas brings a practical illustration of "good will toward men."

In wishing our readers a Merry Christmas we would express the hope that they will find their happiness increased by giving, not with any purpose currying favor, not confining their largess to the home folks, but by doing some unselfish deed to make unfortunates happy also. Thus your own Christmas day will be made happier in the consciousness of some good work done.

Next week will see the coming of the New Year and we hope it may bring ruddy, robust health, happiness and prosperity to every reader of the JOURNAL.

Personal and News Items

RAMBLINGS OF A ROVER

At Asheville, North Carolina

By O. C. MELSON, M. D., Little Rock

Last year at Memphis, the Arkansas Medical Society was honored by the medical profession of the South by having one of its outstanding members elected President of the Southern Medical Association. This year two score Arkansas physicians had the pleasure and pride of seeing Doctor William R. Bathurst preside over the sessions. Not only did he preside, but his address entitled "The Promotion of the Common Welfare: The Aim of Modern Medicine," was an able exposition of what the leaders in medicine are trying to accomplish. This address would do credit to any public speaker. It was one of the real features of the meeting.

Asheville is truly in the "Land of the Sky." The roads to this unique little city are, as the slangsters would put it, on the "up and up." Autumn temperatures had clothed the woods in the most glorious color combinations and this associated with clear, azure skies made the days ideal. Several of the sections arranged their business programs so that the members could take advantage of Nature's gifts to Asheville, the sporty and beautiful golf courses.

The general sessions were among the bright spots of the whole convention. These began Monday and lasted through Tuesday afternoon. The evening sessions were given to the orations in Medicine and Surgery. Both of these were masterly expositions and at the same time were thoroughly enjoyable.

Almost all branches of Medicine were represented at the general session on Tuesday. Twenty-five minute talks were made by members of the Southern Medical Association. This group of papers alone was worth the trip. Many were illustrated with lantern slides. One was illustrated by motion pictures showing the technique of sinus operations.

In this group was a talk by Doctor W. S. Baer of the Johns Hopkins Hospital, Baltimore on "Arthritis Deformans." Ordinarily this is a most uninteresting subject; but in this instance, entirely transformed into one of gripping interest. The time allotted was too short for the speaker and judging from the applause, the audience was far from satiated.

One of our neighbors, Doctor Leander Riely of Oklahoma City, was one of the speakers at this session and his subject of "Obesity and Hypertension" was timely and well presented.

We await with interest the publishing of these and other topics discussed at the Clinical Session.

After the sections began their individual programs, the meeting assumed the proportions of a ten ring circus. Scurrying from one place to another to hear papers was the order of the day. Most of the sections had guest speakers, and these were among the foremost in the country. Not only was it a pleasure to entertain these men from beyond the confines of the South, but their messages were educational in that we learned the thought and actions of other parts of the medical world. Among the guest speakers were Doctors Blackfan of Boston, Crile and Lower of Cleveland, Danzer of Brooklyn, A. B. Davis and Tinne of New York, Gill, Keene, Rehfuess and Skillern of Philadelphia, and A. B. Moore of Rochester, Minnesota. Their presence also made this meeting more cosmopolitan and unconsciously one felt himself transported to a national medical convention where these men are usually in attendance.

Nor were noted Southern men lacking in number. Doctor Bathurst found himself flanked on the stage at the opening session by such men as Lewellys F. Barker of Baltimore, J. Shelton Horsley of Richmond, Seale Harris of Birmingham, C. C. Bass and Oscar Dowling of New Orleans, Stewart Roberts of Atlanta, E. H. Cary of Dallas, W. W. Crawford, Hattiesburg, M. Y. Dabney of Birmingham, Stuart McGuire, Richmond, and others, all men of not only national, but international reputation. In the sections papers were presented by Southern men of equal renown.

To attempt to epitomize the interesting papers read in the sections would be an insurmountable task. Hitting the high spots would do them an injustice. However, some points may be mentioned as of interest and value.

Peptic ulcer may be due to anomalies of the capillary circulation according to Doctor C. S. Danzer of Brooklyn. He studied the blood vessels of the skin of the fingers, mucous membrane of the mouth and of the stomach wall in cases of gastric ulcer. They showed a dilation of the capillaries with an associated stagnation of the blood. Studies of blood vessels in similar locations of cases of gastric carcinoma showed no such changes.

Cholecystography is more than a means of obtaining a picture of the gall-bladder. Doctor Evarts A. Graham of Saint Louis, feels that it is a functional test as well not only of the gall-bladder, but of the liver. In the interpretation of cholecystograms the absorption of the dye, the excretion by the liver and other factors must be considered.

Anyone interested in snakes and snake-bites was well entertained by Colonel Crimmins of Fort Sam Houston and Doctor Dudley Jackson of San Antonio. Not only did they talk about the subject, but they brought the offender before the court in the person of a live, wriggling rattlesnake. It was interesting but too realistic.

Looking around the Scientific Exhibits were many unusual features. Doctor MacKee of New York had a photograph among many others of one of the rare skin lesions, miliary tuberculosis of the skin. Doctor Denne of Carville, Louisiana, had his wonderful colored slides of the various manifestations of leprosy. Doctor Heacock of Memphis had an x-ray exhibit of accessory sinuses, showing their anatomy and pathology as outlined by iodized oil.

Taken all in all it was a most successful and instructive few days. While it was in far away North Carolina, its success was in a large part due to the efforts of a member of the Arkansas medical profession, and we can bask in the light of his brilliant achievement.

LABORATORY TECHNICIANS

The practice of medicine increasingly relies upon laboratory findings in the formation of a correct diagnosis. Some branches of laboratory work, such as the x-ray and tissues, obviously require the services of graduates in medicine, for their practice; while others, such as bacteriological determinations, serological tests, microscopical and chemical examinations of blood, urine, pus, etc., can be performed by any one who has the special technical training involved. In the latter case, when such examinations are made by technicians who are not graduates in medicine, the functions of the laboratory technician is limited to ascertaining and reporting the facts to the doctor or surgeon in charge of the case, who will place his own interpretation on the facts reported.

The increasing complexity of diagnosis involved in our increasing knowledge necessitates the use of many specialists, and the re-

lative scarcity of graduates, as well as the increased expense to the patients who require the use of non-medical help wherever available. The trained nurse now does many things that were formerly incumbent on the physician.

For a good many years now laboratories of medicine have been using technicians, usually female, to do laboratory work that does not require by its very nature the services of a graduate in medicine. Whether this is proper or not has been debated, but the profession has at least gone on, more and more using this technical help.

To meet the demand for technicians our medical school for several years has been giving technician training in connection with the regular courses.

The requisites are: A high school diploma and successful completion of the course in general and special bacteriology, serology, and clinical pathology, which will require attendance at the medical school one full session, the spare time being filled in with special training and practice work in the laboratory of the Isaac Folsom Clinic which supplies abundance of material.

A considerable number have completed this course since its institution, the majority of them satisfactorily filling positions in the clinical laboratories of Little Rock and other cities.

The class this year is the largest of any up to this time, and is said to be composed of very promising material.

We would suggest that any one needing the services of laboratory technicians of this type correspond with the dean, Dr. Frank Vinson-haler.

THE RED CROSS SEAL CAMPAIGN

Practically every reader of the Journal will be sending some Christmas gift by mail or express to friends and relatives in various parts of the country. The annual sale of the red cross stamps is now on. The money derived goes exclusively to the tuberculosis prevention and treatment work. In a time of gift giving when a few dollars more or less is regarded as insignificant, the purchase of the little red cross stamps is just an added trifle to the individual; but the aggregate receipts from this source help the work wonderfully. It is an excellent work, not only in the care of patients, but in educating the public in using preventive measures, especially in homes

which T. B. has invaded, educational work involving sterilization of clothing, bedding, some degree of isolation, such as not sharing a room or bed with a patient and in other precautions to prevent others in the family from falling victims, through ignorance, to the same white plague. We commend the movement to our readers and it may be added that the receipts from this source are devoted to the work in the city and Pulaski County. It is not sent to the national fund.

Following an all-day clinic at St. Vincent's Infirmary, November 10, which was attended by a number of Arkansas physicians, and a dinner that night at the Shrine Country Club, a movement toward the formation of a Little Rock Clinical Society was inaugurated. It was planned to form an organization that will hold monthly medical and surgical clinics here.

This meeting Friday was sponsored by Dr. F. W. Carruthers and was held in honor of Dr. Wm. R. Bathurst, President of the Southern Medical Association. Thirty operations were performed at the hospital between 8 a. m. and 1 p. m. Dr. Dewell Gann, Jr., had charge of the surgery division of the clinic; Dr. H. Fay Jones of the urology division; Dr. Caldwell and Dr. Mahoney of the eye, ear, nose and throat division and Dr. Carruthers of the bone and joint surgery work.

Dr. M. L. Klinefelter, Chief of the Department of Bone and Joint Surgery of the Missouri Baptist Hospital, St. Louis, was the principal speaker at the banquet. Dr. Klinefelter, who is widely recognized as one of the outstanding specialists of the country, spoke on "Problems in Fracture Surgery." His address was illustrated.

The Auxiliary of Pulaski County Medical Society met November 21, in Little Rock, at the home of Mrs. E. H. Wilkes, with Mrs. J. R. Wayne and Mrs. N. W. Riegler as assistant hosts. The house was in Thanksgiving decoration of cornstalks and orange chrysanthemums, carrying out a color scheme of green and orange. Delicious refreshments were served, with Mrs. J. C. Cunningham and Mrs. R. C. Kory presiding at the table. They were assisted by Mrs. B. A. Bennett.

A business meeting was held with the President, Mrs. J. C. Cunningham presiding. Mrs. C. W. Garrison, President of the Auxiliary to the Southern Medical Association, gave a report of the recent meeting held at Ashe-

ville, N. C. Mrs. E. H. White gave an interesting talk on her recent visit to Plymouth Rock. Two contests were enjoyed and prizes were won by Mrs. Arkebauer and Mrs. C. E. Oates.

HEALTH CLINIC

Ashley, Drew and Chicot Counties held a clinic under the auspices of the United States Public Health Service and the co-operation of the County Medical Societies by conducting a special clinic, November 24, at Hamburg, Arkansas.

Dr. M. F. Houston of Hamburg and health officers of the United States Public Health Services of Ashley County presided.

There were some seventy-five cases examined during the day.

Special examinations were given by Dr. Geo. F. Jackson in skin diseases, Dr. S. F. Hoge in Diagnosis and Dr. F. Walter Carruthers in Bone and Joint Surgery.

This clinic was one of the largest that has ever been held in this section of the country.

The Craighead County Medical Society met December 6, 1928, and elected the following officers for the ensuing year:

President, R. H. Willett, Jonesboro.

First Vice-President, W. C. Overstreet, Jonesboro.

Second Vice-President, L. H. McDaniel, Tyronza.

Treasurer, H. H. McAdams, Jonesboro.

Secretary, Thad Cothorn, Jonesboro.

Censor, Wm. Howard Smith, Bono.

County Judge-elect, W. F. Sibeck of Little Rock, announces the following appointments of interest to the physicians. Superintendent of the County Hospital, Dr. Robert P. Harris; County Health Officer, Dr. C. McA. Wassell, both of Little Rock.

Dr. O. A. Carruth, Little Rock, has moved his office to the Urquhart Building.

Dr. S. F. Hoge of Little Rock is in the East to study diagnosis and internal medicine.

Dr. E. N. Davis, Little Rock, has moved his office to the Urquhart Building.

Dr. Robt. Caldwell of Little Rock has returned from a recent visit to New York.

Dr. and Mrs. A. W. Rye of Russellville recently visited in Little Rock.

Dr. and Mrs. G. A. Warren of Black Rock were recent visitors to Little Rock.

The Tri-States Medical Society of Texas, Louisiana, and Arkansas will meet in Texarkana, January 17th and 18, 1929.

Dr. J. T. Palmer has recently been appointed physician for the Arkansas Boys Industrial School at Pine Bluff.

At a recent staff meeting of St. Vincent's Infirmary, Little Rock, Dr. Robert Caldwell, was re-elected Chief of Staff.

Dr. R. J. Calcote, Little Rock, has returned from Europe where he attended clinics on diseases of the eye.

The Southwestern branch of the American Urological Association met in Hot Springs, December 7 and 8, 1928. Dr. H. King Wade is President of the Association. Dallas, Texas, was chosen for the meeting in 1929.

The Officers and Regents of the American College of Surgeons announce the next annual Clinical Congress of the American College of Surgeons is to be held in Chicago, October 14 to 18, 1929.

At the recent meeting of the Masonic Grand Lodge of Arkansas, held in Little Rock, Dr. G. A. Warren of Black Rock was elected deputy grand master and Mrs. A. R. Stover of Little Rock was elected worthy grand matron of the Grand Chapter.

At the December meeting of the Pulaski County Medical Society the following officers were elected: President, Dr. Homer Scott; Vice-President, Chas. C. Reed; Secretary, Ernest Earl White; Treasurer, Wm. R. Bathurst (re-elected); Member Board of Censors, R. J. Calcote.

County Societies

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society held its regular monthly meeting December 6th at the Camden Country Club.

The program was preceded by a banquet. The program consisted of a paper on "Tuberculosis," by Dr. S. J. McGraw of El Dorado and a paper on "Post-graduate Study in

Vienna," by Dr. Albert Mann of Texarkana.

Physicians attending the meeting were Rinehart, Robins, Jameson, McGill and Wooldridge of Camden; Purifoy and Rushing of Chidester; S. J. McGraw of El Dorado and Albert Mann of Texarkana.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

Dr. F. L. Husbands was elected President of the Mississippi County Medical Society at a recent meeting held at the Hotel Noble.

Other officers named were: Dr. T. F. Hudson, Luxora, Vice-President; Dr. F. D. Smith, re-elected Secretary; Dr. R. L. Johnson, Bassett, Censor; Dr. C. E. Wilson, retiring president, was named as the delegate to the annual meeting; Dr. Husbands was elected alternate. May. Dr. Husbands was selected as alternate.

The physicians and the women of the auxiliary enjoyed a dinner prior to the business meetings which were held separately.

Those who attended the meeting of the physicians were: Drs. McCall, Tipton, Washburn, Hill, Husbands, Saliba and Wilson, of Blytheville; Massey and Harwell, of Osceola; Hudson, of Luxora; Polk of Keiser.

In the auxiliary meeting, Mesdames Washburn, McCall, Saliba, Wilson, Tipton, Husbands, Hudson and Harwell were the members present. Miss Louise Hudson, of Luxora; Miss Sallie Crow, nurse of the Mississippi County Health Unit, and Miss Mary Emma Smith of Little Rock, supervisor of nurses, also attended.

WASHINGTON COUNTY

(Reported by P. L. HATHCOCK, Sec.)

Fifty-five physicians, representing three States, attended the joint meeting of the Washington and Benton County Medical Societies held at the Washington Hotel, Fayetteville, December 1.

The business session of the meeting began at 10:30 a. m. and luncheon was served at 12:30 p. m.

At the afternoon session essays were presented as follows. Dr. John R. Caulk, "Hematuria;" Dr. Warren R. Rainey, "Rectal Fistula;" Dr. B. Y. Alvis, "Ocular Operations for Cosmetic Reasons;" Dr. J. Edgar Stewart, "Fracture of the Os Calcis;" Dr. Ellsworth S. Smith, Jr., "Cardiolysis in the Treatment of Mediastino-Pericarditis;" Dr. R. M. Klemme, "Present Status of Inter-Cranial Injury."

Book Reviews

Diseases of the Mouth.—By Sterling v. Mead, D. D. S., Professor of Oral Surgery and Diseases of the Mouth, Georgetown Dental School. 274 original illustrations in the text and 29 full page color plates. Published by The C. V. Mosby Company, St. Louis, Mo., 1927. Price, \$10.00.

The author of this book presents a definite routine plan of procedure for the making of oral examinations, for the recording of data so obtained, and for the future care of the patient.

Crawford W. Long and the Discovery of Ether Anesthesia.—By Frances Long Taylor, with a foreword by Francis R. Packard, M. D. With eight full-page plates. Published by Paul B. Hoeber, Inc., New York, 1928. Price, \$4.00 net.

This book has been written with the aim of presenting an absolutely truthful account of the life and work of Dr. Crawford Long, and with the determination that if the writer discovered that inadvertently any error had been made, it would be corrected.

The author finds that on the first meeting of the Georgia Medical Association, known as the Georgia State Medical Society, organized March 20, 1849, that no formal business was transacted except the passing of a resolution that the Legislature be requested to pass a certain bill. The writer also finds that Dr. Long joined this Society at a meeting in Savannah, April, 1853, and at that occasion read a paper on his discovery of sulphuric ether as an anesthetic.

Medical Record Visiting List or Physicians' Diary for 1929.—Revised. Published by William Wood & Company, 156 Fifth Avenue, New York. Price, \$2.00 net.

In addition to the space assigned to the visiting list (60 patients per week) 28 pages briefly describe valuable information for the physician.

Local Anesthesia by Geza de Takats, M. D., Asst. Prof. of Surgery, Northwestern University, School of Medicine, Chicago, Ill., with an introduction by Allen B. Kanavel, M. D., Prof. of Surgery, Northwestern University, Medical School. Octavo of 221 pages with 117 illustrations. Cloth, \$4.00. Published by W. B. Saunders Company, Philadelphia, Pa., 1928.

Local anesthetic methods are a part of surgical training. It is not a specialty. It is an improvement of surgical technique, which is open and accessible to every prospective and active surgeon. This book is a valuable guide to this line of work.

An Elementary Text Book of General Microbiology.—By Wark Giltner, Professor of Bacteriology and Hygiene, Michigan State College. 99 illustrations. Published by P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. Price, \$3.00 net.

This book presents the fundamentals of the science which deals with the microbes. The reading matter is easily understandable to the student as well as to the graduate physician.

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Original Articles

SURGERY OF THE UPPER RIGHT QUADRANT OF THE ABDOMEN*

J. S. STELL, M. D., Hot Springs National Park
Arkansas

In dealing with this subject, I wish to emphasize adhesions of the hepatic flexure; but in so doing one must consider the gall-bladder because of its close proximity and should be dealt with jointly.

The importance of this particular field of surgery occurred to me about two years ago when I operated a case for adhesions of the hepatic flexure of the colon that had been treated by a number of very competent gastroenterologists. This patient had had his appendix removed about one year before coming to me, with some relief for only about three months. At the expiration of that time he experienced the same symptoms he had had prior to the operation.

The interest of gastroenterologists had been directed at the stomach both as to examination and treatment. This particular patient had outlines of treatment, opinions, prescriptions and diet lists that required some little time to review. With all of this he had no relief. The ease proper I will take up later.

There are two schools of opinions as to the etiology of adhesions of the hepatic flexure of the colon. Such men as R. T. Morris, Bryant, Lane, W. L. Niles (3), Jackson and others have done considerable work concerning their origin. They argue very convincingly that many such adhesions are embryologic, fetal and pertain to early life because such adhesions are frequently found in the young and that a large percentage of cases, wherein such

adhesions are found, have complained of constipation all their lives.

A contrary opinion has been expressed by many surgeons of no less authority namely, John B. Deaver (2), C. Davison (4), J. J. Boyer, argue quite as convincingly that these adhesions are caused by trauma either chemically, infectious or extraneous. Of these, infection is considered the predominating cause because the adhesions are most always found where organisms are most apt to be found, namely hepatic flexures and pelvises of women.

It has been proven laboratorily that germs cultured from abscessed teeth, infected tonsils and ulcerated stomach of the same individual are identically the same. These germs unquestionably reach the stomach by way of the esophagus. These, germs being a strain of the streptococcal group, soon do sufficient damage to lower the resistance, thereby inviting the colon bacilli which cause phagocytosis, and exudate of serum. Consequently, if infection is severe, instead of nature forming a constructive adhesion, they become destructive if not absorbed.

Because of the close proximity of stomach, duodenum, liver, gall-bladder and the angulation of the colon, this location becomes an ideal place for the colon bacillus to enter into anything of a destructive nature if there be a lowered resistance. These germs travel by way of the common bile duct, or lymphatic route.

Then too, inasmuch as all the venous blood returns from the abdomen and lower extremities by the portal gateway, another possible source for irrigation in this region is added.

Suffice it to say, adhesions are found in the abdomen etiologically, acquired or inherited.

Many suffering from adhesions of the abdomen present a rather pathetic picture. They are seeking a sympathetic and attentive hearing for relief. If such is not accorded them they are likely to be passed from one doctor to another as chronics or neurasthenics. Their histories run much the same with few excep-

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

tions, such as some form of stomach trouble over periods of time, gas in stomach, belching, eructation of food, fullness after eating, headaches, biliousness, and lack of energy. Many complain of a soreness in the stomach region or an uneasy feeling. Some have had severe diarrhea, lasting but a few days. But almost one hundred per cent will tell you they have been troubled with constipation for a time ranging from a few months to all their lives.

In a few instances I have found them not only suffering physically, but mentally, being depressed, unable to take an interest in self or assume any responsibility. I recall one patient whose mind, at times was a complete blank, so far as having a coherent thought or ability to form a complete sentence, over periods of an hour or more at a time. This was corrected by freeing his adhesions, thereby relieving his toxicity. At Hot Springs we often find these cases suffering from arthritis, the latter type case presents such a picture no one is likely to pass him by as a neurotic or chronic, as the facts are before you that absorption is taking place from some source. Some of these patients have a perfect right to be discouraged because they have not obtained relief though promised their troubles would be over if their chronic appendix be removed.

I trust I may not be misunderstood concerning appendectomies. I am convinced there are not enough appendectomies. I am as fully convinced that there are too many chronic appendectomies. In the so-called chronic type we have ample time to work out the correct diagnosis and often there will be found adhesions of the upper right quadrant of the abdomen presenting the classical symptoms of chronic appendix. Correctness in diagnosis of such cases is best had by making use of the service of a competent radiologist. Such a man is almost invaluable to surgeons of today, if they wish to avoid many unnecessary mistakes.

It is rather surprising the number of mental cases reported cured by operating for adhesions of the abdomen. I refer particularly to a report by Dr. Henry L. Cotton, head of the New Jersey State Hospital for the Insane. After reading this article by Dr. Cotton and reviewing my cases, I am led to wonder how much of this work is being overlooked in our institutions for mental cases. Who knows if they all get a thorough examination? Isn't it a fact, if a patient presents mental derange-

ment most of us are quite willing (if you will permit a slang expression) to "pass the buck," and after having been passed from one doctor to another time and again, the patient is finally put into an institution and there classified, possibly incurable, without ever having been given as thorough an examination as he deserved, and an examination which might have been the means of his getting back to his place in society.

I have had the good fortune to examine thirty-five patients in the last two years, who have had adhesions about the hepatic flexure; some having gall-stones, cholecystitis and chronic appendicitis. The final diagnosis, in these cases was made by a radiologist.

The eighteen cases I have operated of this nature convince me that the service of a competent radiologist is indispensable in making a correct diagnosis.

In a few of these cases, before opening the abdomen, I intended either doing a cholecystotomy or cholecystectomy; but on freeing the adhesions from about the gall-bladder and colon, the gall-bladder emptied so readily that I thought of the probability of there being unnecessary cholecystectomies.

I am certain I have seen a great number of gall-bladders drained that should have been removed. They were drained because of the task ahead to remove them and I am most assuredly as certain that I have seen gall-bladders removed that should have had the adhesions freed and the gall-bladder left intact. One reason why they were removed I am sure, was their accessibility.

There is one other thing I wish to emphasize: Before correcting the adhesions eliminate other foci of infection.

HISTORIES

I wish to present a few case histories briefly for your consideration. I shall avoid as much detail as possible.

Case No. One

Mr. F. K. M., age 37, came to me March, 1926, not complaining of pain, but a general debility, lack of energy for his work, which was of an official capacity with one of the oil companies of Tampico, Mexico. His troubles began in 1922 with a dull aching uneasiness in stomach region, which was more or less continuous. Time of day, eating or what he ate, had no particular effect on the feeling in his stomach. Said he had taken some form of laxative every night for eighteen months pre-

eeding his coming to me. His appendix was removed in 1923, then the same condition returned. He had been treated by a number of gastroenterologists; in fact, at times became very despondent and indifferent to himself and his responsibilities. History: With the exception of being considered a weakling when a child, he had never had any serious illness.

Physical examination: He was a man of medium build, weight, 150 pounds, sallow complexion, normal findings with the exception of a tenderness on palpation of upper right abdomen and stomach region; right testicle had never descended into scrotum. X-ray of gastro-intestinal tract showed adhesions of hepatic flexure of colon almost causing complete obstruction. This was confirmed when operated April 25, 1926. The ascending colon was adhered to transverse colon at angulation, making an acute angulation. The patient's bowels began functioning normally the third day after operation. Eighteen months later he informed me that he had not taken a laxative for his bowels and had been feeling fine in every way.

Case No. Two

Mrs. B. B. H., age 65, came to me June, 1924. Past and family history of no importance. Eight years previous dull aching pain began in upper right abdomen, causing her to vomit at times, but never had any temperature. The pains became more severe until she resorted to surgery for relief. She said that the gall-bladder and appendix were removed and that many adhesions were found about the gall-bladder. For about one year she was free of her troubles, then the pain began as of old. She asserted that she made three visits to consult the surgeon who had operated her because of the intense pain of the abdomen. She was told to return home and get herself built up so she could stand an operation. However, the last time, because of her weakened and frail condition, she was advised that she could not stand another operation.

On examination, I found a very frail and weakened patient, suffering intense pain, unable to retain anything in the way of food, weighing one hundred pounds, several bad teeth, heart and lungs normal, abdomen rather flat and emaciated. Much pain elicited all over abdomen on palpation, urine had considerable albumin and hyaline casts, x-ray showed

adhesions about appendix, liver, duodenum, colon and stomach.

This patient was given a liquid diet, quantities of Mountain Valley Spring Water and Hot Springs Baths. As soon as her urine had cleared and she had gained strength, I advised operation, which was done on June 25, 1924. The ileum near the ileocecal valve was adhered about three inches up the ascending colon. The hepatic flexure was adhered to the antero surface of liver; the stomach and duodenum were bound to under surface of liver and where gall-bladder had been removed there seemed to be almost a solid mass of adhesions.

These organs were freed by ligating and severing the adhesions and within an hour after she had awakened from the anesthetic said that she felt better than she had for two years previous. Her recovery was most satisfactory.

Case No. Three

Mr. S. E. R., age 57. I was called to see November, 1927. He was suffering from an intense pain in right upper abdomen, knife-like in character.

History: Never any severe illness though troubled with constipation for ten years, and pains of dull character under right scapular. He had to take purgatives three or four times every week to get his bowels to move. At the time I saw him he had what he called "a fullness in his head," mind flighty and frequently of a blank character, hands swollen and temporary blindness. His general appearance was very toxic. Physical findings of no special significance with the exception of tenderness in the region of the appendix and up to the costal border and right leg amputated upper third of thigh because of an accident 33 years previous. X-ray showed adhesions at hepatic flexure of colon and cholecystitis.

On operating I ligated and severed the bands of adhesions, after which the gall-bladder emptied readily. The raw surface I protected with omentum where possible.

The patient's mind returned to normal in three days after operation. He had no further trouble with constipation or soreness of abdomen.

Case No. Four

Mrs. R. L. M., age 58. I was called to see in July, 1923. She was suffering of severe gall-stone colic. The pains were quite acute. Family history of no importance other than mother died of liver trouble.

Personal History: No illness other than 27 years previous had had similar pains to present attack. Similar attacks occurred 7, 5, 4 and 2 years later and for the last seven weeks they had been more or less continuous. Complained of gas all the time and could not remember a time when free from constipation. Her stools were clay colored unless she resorted to laxatives frequently.

Examination: Blood pressure, 190 systolic; 100 diastolic; trace of albumin, casts and bile in urine; much tenderness in upper right abdomen on palpation. When in an attack unable to bear examination of abdomen. X-ray showed eleven stones about the size of end of small finger and adhesions of hepatic flexure of colon.

Operation: On operating I ligated and severed the adhesions, gall-bladder removed and eleven stones found. I hear from her frequently. Though five years have elapsed, she says she is feeling quite well.

Case No. Five

Mr. J. H. R., age 65. I was called in consultation February, 1927. Patient was suffering with severe pains below right costal border. For seven years had been troubled with sour stomach, especially if he ate too much for evening meal, he would usually awaken with headache next morning.

His physical findings pointed directly to an acute gall-bladder. He refused to go to the hospital though two days later I was called back to see him. His condition was much worse and he consented to go to the hospital; he was operated as an emergency case and I found bile in the abdominal cavity walled off by the omentum. This was removed by suction. The gall-bladder was ruptured at the end, no stones were found, but bands of adhesions constricting the common duct. These were freed and gall-bladder drained with rubber tube for twelve days. His temperature subsided after fourth day to normal; his recovery was uneventful.

I see him frequently and he reports that he is feeling better now than he has for twelve years past.

Case No. Six

Mr. T. S., age 51. I saw first in February, 1922. He was emaciated, general run-down condition and had been treated for ulceration of stomach for more than a year. He had had good health all his life other than last eighteen months suffering from aches and pains,

dizziness, with pressure about the heart. He was sure to have headaches following upset of stomach. A fullness and soreness immediately following a large meal.

Examination: Several abscessed teeth, heart and lungs normal; blood pressure, 100-75. Pains in upper right abdomen on deep palpation radiating to stomach and umbilicus region. Colon bacillus found on culture from bile drained with duodenal tube.

He improved for a time and was able to go on with his work as a bookkeeper until September, 1927. His condition became so bad he was unable to do his work or retain anything in his stomach. Often he would vomit water taken. I put him to bed for six weeks, feet elevated, and on a liquid diet, after which I had gastro-intestinal picture made and found adhesions at hepatic flexure of colon.

I operated him November, 1927, found the adhesions causing almost complete obstruction at hepatic flexure. These were freed by ligation and severing and the appendix was removed.

His recovery was good and he gained twenty-five pounds within two months. He now says he is able to eat anything he wishes.

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- (3) Congenital fixation of Duodenum—By Walter L. Niles, M. D. (Believes there are more congenital adhesions than are generally recognized.)
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PUERPERAL SEPSIS*

G. E. CANNON, B. S., M. D., Hope

By puerperal sepsis we mean an infection following fetal delivery at some stage of pregnancy.

Practically all infections of the female pelvis are caused by instrumentation, abortion, labor or gonorrhea. A greater per cent of all infections is gonorrheal in origin and may

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

follow instrumentation, abortion or labor, but most of them are not induced by either of these causes.

The three main types of pelvic infection are, first, gonorrheal, second a mixed infection where often the gonococci predominate and, third, the true puerperal type where the streptococci alone cause the trouble.

PATHOLOGY

Puerperal, or streptococcic infection, is a wound infection caused by the organism entering the system through a lacerated perineum, vagina, cervix, or through the placental site. There are two great protective membranes of the body; the mucous membrane lining all open canals, and having great resistive power against bacteria. This membrane can be greatly abused and yet withstand the invasions of warriors assaulting our systems. The other membrane is the great serous membrane lining the closed cavities, which is less resistive to bacteria than the mucous membrane, though it withstands a great deal. When it is finally overcome by bacteria it weeps, as is seen in pleuritic effusions. Both of these membranes are prone to localize disease as is seen in gonorrheal pus tubes. Gonorrhea is almost solely confined to mucous surfaces. Streptococcic, or wound infection as we call it, is not confined to either mucous or serous membranes; but goes through lymph and blood channels to the underlying structures and is not localized. It penetrates the tissues between these two membranes and is retroperitoneal. Infection of the sigmoid following a dirty hemorrhoidectomy and a retrocecal appendicitis resemble very much a true puerperal infection. This form of appendicitis is the most fatal type, because it is in a sense retroperitoneal and the resistance is poor. Remember that streptococcic infection is a wound infection and retroperitoneal and diffused.

SYMPTOMS

From three to five days after abortion, instrumentation or labor, there is a rise of temperature from 101 to 105 degrees, and a pulse rate from 120 to 150. There is not much tenderness over the abdomen at first, but soon becomes quite marked. The distension at first may not be noticed, but later prominent. The patient is bright and does not seem half as sick as she really is. There is some intoxication, acting as a stimulant for some days, that makes you sometimes be-

lieve the patient is not dangerous. She sleeps very poorly, and most of the time the lochia is dried up. There is no localization of the disease and often it is impossible to be positive as to the cause of the fever.

A fever coming on the fourth or fifth day with a pulse so rapid as to be out of proportion should be considered puerperal.

DIAGNOSIS

In gonorrheal infection we have a history of a purulent discharge for some time, with a local point of infection over the tubes with a more quiet pulse and rarely so high fever. There are a good many other things that produce pelvic infections, but they seldom do so and then we can usually find the cause quite easily. Recently I had a case developing a high temperature on the fifth day, with a pulse not so rapid as you see in puerperal fever. A vaginal examination revealed a large, partly decomposed blood clot. This was removed and a forceps introduced into the uterus revealed nothing. The patient did better, but continued too much hemorrhage and some fever. Four days later I was called back and then found a sloughing fibroid tumor the size of an orange trying to pass out of the cervix. The uterus as it receded was about to expel the tumor. A removal of this cured the patient. Any persistent fever running from 101 to 105 with a pulse from 120 to 150 coming on the fourth or fifth day, with almost a cessation of the flow should be held under great suspicion and managed as a true puerperal fever.

PROGNOSIS

On account of the source of infection, mode of onset and course of the disease it is a grave condition. As we have very little knowledge as yet as to how to combat this treacherous malady many are the motherless children found over our land as a result of it. The death rate cannot alone be charged to the physician, though his dirty hands and instruments are often its cause, but the ignorance of the laity is largely to blame for it.

TREATMENT

The main treatment is prevention. Soap and water is the most valuable sterilizer we have. These are much more economical in every way than infections of any kind. Use them freely and well on everything pertaining to labor. The external genitals should be washed daily for several days previous to

labor. Everything about the delivery room and bed should be as sterile as an operating room. When the obstetrician has thoroughly scrubbed for his work he should not contaminate himself with anything. Touch nothing except sterile things and the genital tract. In other words, "watch your step." If you have no other way to sterilize your lap sheet and other linen used on the delivery bed, bake them in a stove for a few minutes. The physician or nurse who cleanses hands ever so well and then handles everything around cannot of course have sterile work. How often careless handling is done! A labor case should be handled with the same aseptic care that an appendectomy is done. Eternal vigilance, coupled with the most scrupulous cleanliness will get us by most cases without trouble.

In my practice of thirty years I have had two cases of puerperal or wound infection. My first case was twenty-five years ago. This was caused, I feel sure, by using a Kelly pad, which it is almost impossible to sterilize. At that time Kelly pads were much in demand in labor cases. After this experience I threw mine away for all time in labor cases, though more than one case after this I failed to attend because I would not use a Kelly pad. The other case was in January this year. It was a case in a very unsanitary home that I had not known about until I was called to attend it. I had my own nurse with me and we were as careful as we could be, though in five days after delivery she developed a severe case. I have never known how it happened and am ashamed that it did happen, because we always feel like censuring ourselves for such terminations. My first case died on the tenth day. My second case recovered in about the same length of time by the use of about five 50 cc. intravenous doses of antistreptococcic serum.

One method that will prevent some cases of this wound infection is to immediately repair all lacerations around the birth canal. There is absolutely no excuse for delay in doing this.

Surgery is a great thing in curing disease when it is localized or in other words when we can amputate the disease. Puerperal sepsis is not a surgical disease, because it is through the tissues, retro-peritoneal as we have said. If we were to remove the uterus, tubes, ovaries and even the broad ligaments, we would not have removed the disease. If we attempt curetment we have only added to our fire. In gonorrheal infection we can see brilliant re-

sults from surgery in the very early days of infection after the subsidence of the acute stage when the pus has localized. Not so in this wound infection. Surgery in any form in this disease should be well in the background. Douches, mopping out the uterus and such local treatments will give the nurse and doctor something to do and make the family feel like something is being done, but it is doubtful if any good comes of it. No internal medication that we know promises anything except to conserve the patient's vitality. I believe there is only one remedy that holds out hope of recovery in a severe case of puerperal infection and that is antistreptococcic serum. It is the general belief among obstetricians that this remedy is no good. Out of about fifty opinions from the leading men of the country only about three think much of it, but despite this I believe it saves and will save many lives if used real early in doses of 50 cc. intravenously every six to twenty-four hours for several doses if necessary. To get results it should be used just as soon as a diagnosis can be made. It should be put into the vein and if no results, repeat in six hours. If better in six hours wait longer. The serum should be fresh and have been kept in cold storage. Do not hesitate to use several doses if necessary. The failures that have come about have no doubt been caused by using old or heated serums or not enough of it or not early enough in the case. In the past four years I have had one case of my own and seen four or five other cases in consultation. All of these cases, except one, had a gradual reduction of temperature to normal in five or six days and up and around in ten days. The other case was seen too late to do any good with any treatment. All these cases were treated with the serum as outlined above with practically no other treatment.

My faith is so strong in the serum that I will venture the assertion that if the serum is fresh, the case in its early stage and the serum used in sufficient quantity in the vein, repeated often as directed ninety per cent of the cases will recover.

SUMMARY

First, almost all pelvic infections are due to instrumentation, abortion, labor or gonorrhea.

Second, gonorrhea is an infection of mucous membranes and localizes, while puerperal sepsis is a wound infection and travels the blood streams and lymphatics and does not localize.

Third, a rapid rise in temperature and pulse out of proportion, coming on the fifth day, which persists and the cause cannot be easily located should be at once suspicious.

Fourth, scrupulous cleansing and the free use of soap and water with eternal vigilance on the attendant's part often prevents infections.

Fifth, after the disease has been established the only worthwhile remedy is fresh antistreptococcal serum used in 50 cc. doses intravenously every six to twenty-four hours for five to six doses if necessary.

DISCUSSION

DR. S. F. Hoge, Little Rock: I am much interested in what Dr. Cannon has had to say, because it is a very serious condition, and it occurs, as he outlined for you, very rarely. Unless one has fixed in his mind a systematic method of handling these cases that approach precipitously, he does not succeed so well as he might like. There is usually no opportunity to go back and review the treatment when it is most needed. Sometimes we get a better aspect by looking back over the case.

The point that he has mentioned particularly with regard to the source of the infection, I think, is extremely timely. I should like, however, to add just a little more to that, not pertaining to the immediate source, but to the remote.

It was very interesting and instructive to read an article by Curtis of Chicago, in which he was able to prove to his own satisfaction, that streptococci and possibly other organisms remained alive in the tissues of the uterus and adnexa for 20 years or more. It doesn't seem to me that is going very far beyond the suggestion Dr. Cannon left with us a little time ago, when he traced the changes of the mucous membrane lining the cervix. These cells have been followed along the lymphatic structures and the blood vessels from the cervix around the uterus and to the tubes where they may remain or start proliferation. The organisms may and possibly do follow a like channel or course. In later times when the anatomy of the uterine structures are disturbed, as they are in the primipara, these organisms are liberated and offered a new opportunity for growth.

Now another very important point I would like to emphasize: The doctor says this is an open wound and not localized. If it were a localized wound we would not have puerperal sepsis. The streptococcus, as you know, in conditions of this type do not have a tendency to localize, which accounts, in a great measure, for the extreme toxicity and seriousness of the condition. It ceases to become a localized reaction and becomes a diffuse cellulitis. Probably the key-note of the localization is the limitation of dosage of toxin. There is no barrier of resistance in the dead mucous membrane and all or most of the toxin generated is absorbed into the body in massive doses. To me it is not surprising that we see such a change, such a pyretic reaction following such ready absorption of toxin in infections of the uterus.

The essayist has given you the suggestion of specificity in the treatment of these conditions in the use of the anti-streptococcal serum. He was not in the least dogmatic in his deductions. The streptococcal sera which yield the best results are

those used in relationship to the therapy of erysipelas and scarlet fever. The use of this same serum is not entirely empiric when we hold that many of these septic conditions are due to a streptococcus not entirely foreign to erysipelas and the one causing scarlet fever.

Much of the treatment is carried out along biologic lines. The anti-streptococcal serum is rather more specific than any other biologic product on the market. Immunogen and leucocyte extract have been used with varying results.

There is another line of treatment which we frequently see used in the hospitals and which seems to me should not be omitted in the consideration of the different forms of treatment. This is transfusion. In mentioning transfusion I am not unmindful of the hazards and the different opinions concerning its use. Transfusion is aimed specifically at the streptococcus, but the streptococcus has so impoverished the hemogenic system that the patient is much handicapped by the loss. This must be built up in the best manner possible. The best agent to accomplish this is the introduction of a quantity of human blood into the system. This may have very little direct effect on the streptococcus but, on the other hand, it may introduce antibodies in addition to the replacement of the destroyed red blood cells. We have seen some apparently brilliant results following transfusion in these cases. These were equally as brilliant as those following the use of streptococcal serum. May I leave the suggestion that if the streptococcal serum as outlined by the doctor fails, that there is still the chance to help the patient, through transfusion.

DR. CANNON, in response: I thank Dr. Hoge for what he said. There are a great number of things that might be mentioned along these lines. One very important thing I omitted a while ago, is the immediate repair of all birth canal injuries. I think it is absolutely inexcusable for any man to leave these alone. If you leave them open, then you have an open space there for the absorption of any thing that might be there. If they are closed up, your patient is better off and you are better off. I wish you would read in the Journal of Obstetrics and Gynecology, in March, an article on the immediate repair of birth canal injuries. I think we ought to watch our step on that thing and change our ideas a great deal and repair them immediately when we have them.

REPORT OF CASE

G. G. ALTMAN, M. D.*

Helena, Ark.

Case I am reporting tonight possesses unusual interest because of its progress and outcome and, perhaps, offers a lesson in persistence in the face of obstacles that seem forbidding.

Miss T. P., white, age 24, was admitted to Hospital July 28, 1928, referred by Dr. W. W. Lewis of Marvell, Arkansas.

On admission the patient looked emaciated and apprehensive of her condition, she had

*Presented before Staff meeting, Helena Hospital, October 2, 1928.

been in bed more or less constantly for six months and complained of pain on any movement.

Family history negative, early personal history negative, menstruation of the 28-4 day type has never been disturbed, the present illness dates back five years and is indefinite in origin. There is a definite story of attacks of pain and constipation several times a year and two admissions to hospitals elsewhere for study, where she was advised to have removal of appendix and later surgery for pelvic disease.

Blood pressure 114-70, temperature 99, pulse 90, respiration 20, weight 96 pounds with an estimated loss of twenty pounds in two years, eyes are clear and respond, thyroid negative, tonsils out, chest clear, heart normal. Abdomen complained of as being exquisitely tender, allowing not a great amount of investigation. There is some distension, no lumps or masses can be made out, vaginal shows a small fixed uterus with definite masses to either side, extremities are negative.

Laboratory study; Wassermann negative, malaria negative, urine shows an occasional pus cell, blood gave small lymphocytes 21 per cent, large 2 per cent, Poly's 76 per cent, eosinophile 1. Non-protein nitrogen well within normal bounds; by x-ray the appendix could not be visualized, the intestinal canal otherwise was much distorted. Diagnosis, Chronic appendicitis, bilateral pyosalpinx.

Surgery: August 1, 1928, midline incision, abdominal contents are vastly adherent and a seeming impossible task is faced in trying to separate. The appendix is located retro-cecally and viciously bound down. It is tied off, cecum closed with purse string and appendix dissected out, both tubes and one ovary removed, other resected. Abdomen closed usual manner, reaction good with usual progress until August 8th, when vomiting occurred and fever. The usual measures, enemas, morphine, etc. being futile; fecal vomiting present. August 13th, the abdomen was opened through the old incision, already healed. It was found clear, no fluid and no evidence of infection. In searching for the cause several bands were found and released and an enterostomy done, following there was a betterment of all symptoms with an occasional small stool after enema, the catheter came away on the 8th day.

Three days later vomiting again was bad and fever and later the vomitus became again

fecal in type, in spite of lavage, saline, glucose, morphine, etc. the condition became progressively worse. On the night of the August 26, the patient with a temperature of 105 and a pulse of 160 or there about, pinched expression and death impending, was taken to the operating room and under light gas anesthesia, a small left rectus opening made, a coil of bowel delivered and a size 18 F. catheter inserted, further extra-intestinal drainage provided and the opening closed, requiring but a few moments.

Convalescence from here on was good, the enterostomy tube, carefully fastened with linen, came away on the 14th day, but long before this time, stools of good character were being had twice a day, appetite and intake of food and fluids were normal.

The patient was discharged from the hospital, walking, September 19, 1928. The wounds were healed, no evidence of weakness in the abdominal wall was manifest; reports since then are that she is fine, gaining weight, etc.

The question of whether we were dealing with an ileus or intestinal obstruction is still debatable; but certainly this patient owes her life to persistence in measures of drainage.

Some twenty-five years ago an ambitious young surgeon did a radical operation on a patient for cancer. After the operation he came to the conclusion that his diagnosis was wrong. He decided that if possible this should not happen again. He closed his office and spent two years studying in the great medical centers of the world in an endeavor to learn how to recognize malignancy. This man is today a leading surgeon in his State and a recognized authority on malignant growths. This typifies the spirit of scientific medicine—to recognize our weaknesses, both individually and collectively, and be willing to make real sacrifices to correct them.

The year is ending and this is an excellent time for every one of us to ask himself the question, "What have I done in the past year to improve my own efficiency?" and also, "What have I done to better the medical profession in my community?"—C. B. Wright, Minnesota Medicine.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the state, changes of location, etc., are requested.

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Editorials

DR. KLINE VISITS LITTLE ROCK IN THE INTEREST OF A NEW HOSPITAL FOR NERVOUS DISEASES

For many years, it has been very patent to the Managing Boards of the State Hospital for Nervous Diseases that radical improvements must necessarily be made if the hospital was to function in any degree comparable to the demands of advanced psychiatric trends in segregation and treatment. The present Board of Managers has determined to present to the Legislature in a cogent and comprehensive manner, plans for the betterment of the service of the State to the mentally ill, and in furtherance of this plan, in conjunction with the Legislative Committee appointed to investigate the needs of the Hospital, they invited Dr. George M. Kline, Commissioner of Mental Diseases of Massachusetts to make a survey of the institution, examine into its deficiencies and make such suggestions as would enhance the medical and administrative results in treatment. Dr. Kline was selected after considerable investigation and consultation with prominent psychiatrists and hospital administrators. A graduate of the University of Michigan, he has had a long varied career in the psychiatric problems of the State. Advancing through the grades of assistant physician to the superintendency of Danvers State Hospital, he was selected in 1916 as Commissioner of Mental Diseases of Massachusetts and has filled that position for the past twelve years through several political changes in the Governor's chair. He was President of the American Psychiatric Association, 1925-1926, and for six years has been a member of the Medical Council of the Veterans Bureau Hospital. More recently he has been made a Chevalier of the Legion of Honor by France because of his constructive counsel with the French Mental hospitals of Canada. For years he has been considered one of the leaders in the progressive field of psychiatric endeavor and has made many surveys for hospitals and States. He made a most favorable impression on those with whom he came in contact and Arkansas has seemingly been extremely fortunate that his services could be obtained at this particular time, a courtesy extended to us through the kindly offices of the Governor of Massachusetts, Alvin T. Fuller.

THE BAN ON EVOLUTION

From any viewpoint the passage of the act to prohibit the teaching of evolution is regrettable. It not only holds up the State to ridicule, but it is a serious handicap to the Medical School of the University of Arkansas. The proponents of the measure seem to be somewhat at sea in their ideas. At a recent meeting one speaker started his address by emphasizing the idea that he stood firmly for complete separation of church and State. And immediately thereafter he attacked the theory of evolution wholly on the ground that it leads to disbelief in the bible account of creation, thus putting his objection entirely on religious ground. He did not seem to realize the fact that by calling upon the strong arm of the State to enforce a law as being against his religion, he practically espoused the union of Church and State. When the State is called upon to help a religious dogma, in a country which expressly provides in its constitution for religious liberty and provides further that no laws shall be passed in the interest of religion, it literally means a union of Church and State. The speaker in question used the old argument that inasmuch as the bible is prohibited as a text-book in the public schools nothing that attacks the authority of the bible should be permitted in tax supported schools. Of course the argument is utterly puerile and foolish, and while it is held that it is wrong to make believers in the bible pay for teaching what they regard as heretical, it does not occur to these objectors that it is equally wrong to deprive the children of other taxpayers of scientific instruction. It is just the same argument which in a darker age executed scientists who insisted that the world was not the center of the universe, that it was round and not flat and that it revolved around the sun. We seem intellectually to be going backward instead of forward. It is half a century since Darwin formulated his theory and while the church did not acquiesce, it simply ignored it. No one thought for a moment of invoking the law against it. It remained for the late William Jennings Bryan to father that plan and the aim of the anti-evolutionists is to make such laws nation-wide.

Abstract

FOOD ALLERGY

Albert H. Rowe, Oakland, Calif. (Journal A. M. A., Nov. 24, 1928), points out that food sensitization is more common in adult life, as well as in childhood, than is generally appreciated. A positive history of allergy in the patient's family or personal history should denote the possibility that allergy is causing the symptoms under suspicion. It is usually difficult for the patient to determine which foods are causing allergic disturbances. This is especially true of the common foods, such as wheat, milk and eggs, to which patients are most frequently sensitive. Skin reactions especially by the cutaneous scratch method are frequently negative in pollen, animal emanation and especially, in my opinion, in active food allergy. Determination of sensitization of foods therefore must depend on dietary trial. Such dietary trial is even necessary when skin reaction to foods are positive since such reactions, as stated by Alexander, may indicate a localized allergy in the skin and not in the affected tissues. The diagnosis and treatment of allergy and especially of food allergy are not laboratory proceedings, but demand a most careful history, supervision of the diet, and a control of concomitant types of allergy. They also demand thorough diagnostic study with laboratory and roentgen-ray investigations to determine all existing pathologic conditions. A series of 175 food-sensitive patients have been grouped according to their chief allergic manifestation. Abdominal allergy manifesting itself in abdominal pain, colic, gastric and intestinal distress, distention, nausea, vomiting, constipation or diarrhea is of frequent occurrence, fifty cases; urticaria, twenty cases; angioneurotic edema, fourteen cases; eczema, sixteen cases; migraine, thirty cases; bronchial asthma, forty-five cases. Other manifestations of food allergy are: epilepsy, hay-fever and sinus congestion, bladder allergy, allergic intoxication and malnutrition, fever in children; menstruation can be disturbed and made irregular and painful by food sensitization. Hypotension frequently occurs in patients with marked food allergy of long standing. A case of Tenoch's purpura, due to food allergy has been described. The treatment of food allergy itself may be considered under three heads: 1. When skin reactions are positive to certain foods or there is a history of disagreements

to definite foods, simple exclusion of such foods frequently controls the allergic manifestations. 2. When skin reactions are negative or diets excluding all foods giving positive reactions are not effective, the use of food trial is indicated. The general principle in the formulation of these diets has been to include one or two starches, and meats, from two to four vegetables and fruit, together with sugar, oil and salt. Oil may be either olive, cottonseed or maize oil according to the likelihood of sensitization to any of them, and comparatively large amounts of oil should be taken on salads and of sugar on fruits and in fruit drinks in order to increase the calories. The physician or the dietitian can help the patient plan quite satisfactory menus from the foods in these various diets, insisting on the strict exclusion of even the slightest ingredient in the diet which is not in the prescribed list. Four elimination diets are detailed. 3. The following procedures have also been recommended to counteract food allergy: (a) Peptone; (b) nonspecific protein therapy; (c) administration of calcium lactate by mouth or calcium chloride by vein; (d) desensitization to foods gradually occurs in some cases from their prolonged exclusion from the diet.

Personal and News Items

In a letter from Mrs. J. S. Jenkins, Secretary, Arkansas Society for Crippled Children, Pine Bluff, we quote one paragraph that explains a feature of their organization that has not been clear to many of our readers:

"There is no good reason why your county should spend money in and for another county to care for your cases, which would only benefit a few children each year, when you can spend it in your own county and reach every child needing care and education.

"We want it thoroughly understood that this Society is not duplicating the work of any other agency, and instead of hindering any other work, our efforts will help those who are centering their activities in one or more phases, or particularly one phase, namely, hospitalization. We will help and increase their capacity for work, especially in the Little Rock institution, and furnish them with necessary funds for maintenance, which would permit them to give strict attention to their patients and at the same time relieve them of the tedious responsibility of securing private aid."

At the regular meeting of the Faulkner County Medical Society, December 20, 1928, the following officers were elected:

President, M. T. Smith; Vice-President, Joseph H. Downs; Secretary-Treasurer, J. S. Westerfield.

Dr. W. T. Wootton, Hot Springs announces the re-opening of his office for the practice of medicine on January 1, 1929. Office, Fifth Floor, Dugan-Stuart Bldg.

The new clinical building of the Leo N. Levi Memorial Hospital, Hot Springs, a charitable institution, to be known as the Charles Steinberg Clinic, was opened to patients Monday, December 17. The new clinic is a one-story brick building, connecting the hospital proper and the nurses' home, and was recently completed and equipped at a cost of \$40,000.

Dr. G. G. Altman of Helena, recently moved to Louisville, Kentucky.

At the recent meeting of the Southern Surgical Association at White Sulphur Springs, West Virginia, Dr. Mahlon D. Ogden of Little Rock was elected to membership. Atlanta, Georgia, was chosen for the 1929 meeting.

At the regular meeting of the Searcy County Medical Society, December 21, 1928, the following officers were elected for 1929:

President, J. C. Pate of Big Flat; Vice-President, G. W. Dickens of Leslie; Secretary-Treasurer, Sam G. Daniel of Marshall; Delegate to State meeting, J. O. Leslie of Marshall.

Dr. John R. Dibrell and Dr. Oliver C. Melson announce the association of Dr. Herman W. Hundling, surgeon, 909 Main Street, Little Rock.

For his work in an investigation of the ductless glands, and particularly in his isolation of pituitary hormones, Dr. Oliver Kamm, director of chemical research of Parke, Davis & Company, manufacturing chemists, has been awarded the \$1,000 prize by the American Association for the Advancement of Science for the "most noteworthy contribution to science presented at the annual meeting."

Mid-Winter Session of the Council Held December 28, 1928, At Little Rock

in Joint Session With the Chairmen of the Various Committees

Called to order at 12:30 p. m. President Mann in the chair.

Roll call showed present: Councilors Evans, John, Purifoy, Gann, Sr., Mann, Cothorn, Barlow, Bathurst, Smith, Gann, Jr., S. F. Hoge, Calcote, Vinsonhaler, Garrison and Majors.

Dr. Mann in stating the object of the meeting, outlined a tentative program for activities in the effort to solve the medical problems that confront the people of Arkansas at the present time. He was especially pleased to announce that the ladies were manifesting a keen and absorbing interest in the outcome, and he felt that the profession and laity through co-operation and energy would be able to secure the remedial legislation desired at the hands of the next General Assembly.

Dr. Evans reported the doctors in his vicinity heartily endorsing everything the Arkansas Medical Society is striving to accomplish. He felt confident of the sympathy and support of the legislators from his district.

Dr. John reported the sentiment favorable in his own county and those adjacent which he had visited the week before Christmas. The profession and the laity were vitally interested in an improved medical practice law and better facilities for the medical school. Those with whom he had discussed our medical requirements seemed to be very enthusiastic over the prospect of favorable action by the next General Assembly.

Dr. Purifoy said the doctors of his district would do all in their power to facilitate the passage of the measures we are proposing, and he felt sure of the support and co-operation of the legislators coming from his section.

Dr. Gann, Sr., had found the sentiment in favor of the medical laws we were advocating, in the counties Dr. Vinsonhaler, Dr. Watkins and he had visited, and he felt sure the profession, the laity and the legislators from his district would line up in favor of any improvement championed by the Arkansas Medical Society.

Dr. Calcote reported the scientific program pretty well under way. He believed he would be able to secure some outstanding medical men of natural renown for the Hot Springs meeting in May.

Dr. Gann, Jr. gave a resume of the work of the Committee on Cancer Control, including the distribution of literature and broadcasting of helpful talks by radio from station KGJF, the management having allowed us the use of their apparatus without expense, which he gratefully acknowledged. On motion the Committee on Cancer Control was allowed one hundred dollars for expenses to facilitate their work, in addition to fifty dollars voted at Council meeting in May last.

Dr. Hoge reported good progress in his committee work and said he believed there was a great opportunity for good in ethical publicity. He was gratified over the encouragement and support the committee had received, and believe the effort to supply reliable information to the laity and the profession was entirely legitimate and a move in the right direction.

Dr. Garrison reported that in his rounds over the State he had not encountered any serious opposition to the proposed basic science law and other reforms fostered by the medical profession.

Dr. Vinsonhaler reported having visited 70 of the 75 counties in the State. Was cordially received and was pledged co-operation, except in one or two instances. One senator was in favor of the repeal of all medical laws now existing, and make a free-for-all competition among practitioners regardless of skill or peculiar fitness. He was hopeful that this particular man might be persuaded to take a rational view of the matter later on, and be made an ally of medical progress. He had encountered very little opposition to the proposed basic science law. He had found that a man had been following him in his rounds, and without publicity had been conspiring with the local quacks to minimize and controvert the arguments advanced in the campaign for medical education. This man was killed in an automobile accident near Russellville, and in his grip was found evidence showing his connection with the American Society of Chiropractic.

Dr. Vinsonhaler expressed his optimism and said he believed everything would depend on efficient team work in meeting the specious arguments advanced by those opposed to us. It

meant a fight to the finish when we come to grips, in the General Assembly. He recommended that the Committee be allowed a fund for traveling and other expenses during the session and be given authority to employ legal help if deemed necessary and expedient.

On motion of Dr. Gann, seconded by Dr. John, the Committee was authorized to spend whatever amount deemed necessary for legitimate expenses in carrying on its work of promoting legislation during the coming session.

Dr. Barlow said that from his viewpoint success seemed assured. He referred to some very satisfactory interviews with various members of the legislature and public officials. All seemed favorably impressed with the justice of the basic science law and other measures proposed.

The chair referred to some very unsatisfactory conditions reported as existing in Sebastian County, where certain members had aligned themselves with a co-operative hospital, the management of which were sending out solicitors offering medical services indiscriminately at the rate of two dollars per month to each individual subscriber, with rates for laboratory work much lower than the usual charges for such tests. The Sebastian County Society had stricken the names of the offending physicians from its roster and instituted proceedings before the Grand Jury to revoke their State license account violation of the Gant Law. Owing to the unavoidable absence of Councilor Wolfermann full particulars were not available. On motion, duly seconded and carried, the Secretary was instructed to remove the names of the unethical doctors from the roster of the State Society and to commend the Sebastian County officials for their summary action in the matter, and to assure them of the interest and hearty support of the parent society in the effort to establish higher standards of organized medicine in Arkansas; that the State Society stands at all times ready and willing to co-operate with them and render any assistance in its power.

On motion of Dr. Gann, seconded by Dr. John, Dr. Vinsonhaler was voted an honorarium of five hundred dollars to reimburse him for expenses incurred in traveling over the State in the interest of medical legislation and conducting a campaign of education, preparing the public mind, etc. Dr. Vinsonhaler protested that his activity was a labor of love, an under no circumstances would he accept a monetary consideration.

On motion of Dr. John, duly seconded and carried, the Secretary was authorized to select a suitable gift to be presented to Dr. Vinsonhaler from the Arkansas Medical Society, in token of the appreciation of his painstaking and efficient service in behalf of the profession and the welfare of the Commonwealth.

On motion, duly seconded and carried, the Secretary was authorized to defray the incidental expenses of the Mid-Winter Session of the Council, including railroad fare and hotel expenses of members attending the meeting.

Adjourned at 2:30 p. m.

Dewell Gann, Sr., Chairman.

L. L. Purifoy, Secretary.

The local surgeons of the Missouri Pacific Railroad met at Little Rock, Monday, January 14, 1929. A surgical clinic was held at the Missouri Pacific Hospital during the morning session and scientific papers were read in the afternoon. A dinner was given at 6:00 o'clock.

Among those present included Dr. O. B. Zeinert, Chief Surgeon and Mr. H. J. Mohler, President of the Board of Managers.

INDEPENDENCE COUNTY WOMAN'S AUXILIARY

(Reported by MRS. L. T. EVANS,
Corresponding Secretary)

The Woman's Auxiliary of the Independence County Medical Society entertained with a beautifully appointed banquet on Monday evening, December 10, 1928, at the Country Club, Batesville, celebrating their second birthday and complimenting the members of the County Medical Society and their wives.

Dr. Thad Cothorn, President-elect of the State Society, and Mrs. Cothorn of Jonesboro; Dr. and Mrs. Warren of Black Rock; Dr. Majors of Paragould, and Dr. Stidham of Walnut Ridge were guests of honor.

The dining room was lovely with Christmas decorations and the table was laid for thirty-three guests. Mrs. C. G. Hinkle, President-elect of the Auxiliary, presided. Mrs. R. C. Dorr was toastmistress and introduced Dr. J. M. Hooper, who responded to the welcome on behalf of the County Society. Misses Sullivan and Gray entertained with readings.

Those present were: Dr. and Mrs. Cothorn, Jonesboro; Dr. and Mrs. Warren, Black Rock;

Dr. Majors, Paragould; Dr. Stidham, Walnut Ridge; Dr. and Mrs. Laman, Cave City; Dr. and Mrs. McAdams, Cord; Dr. Jeffery, Bethesda; Dr. Huskey, Moorefield; Dr. and Mrs. Sullivan, Poughkeepsie; Dr. and Mrs. R. C. Dorr, Dr. and Mrs. C. G. Hinkle, Dr. and Mrs. J. M. Hooper, Dr. and Mrs. F. A. Gray, Drs. Craig and Rodman, Dr. and Mrs. O. J. T. Johnston, Dr. and Mrs. L. T. Evans, Mrs. Maud Jeffery, Mrs. Saylors, Misses Johnston, Sullivan and Gray, Batesville.

The Auxiliary was honored in having present the President-elect, both of the State Medical Society and the Woman's Auxiliary, Dr. Cothorn and Mrs. Hinkle. Also two former Presidents of the State Medical Society, Drs. Warren and Dorr.

PULASKI COUNTY WOMAN'S AUXILIARY

(Reported by Mrs. R. C. KORY)

The regular meeting of the Pulaski County Woman's Auxiliary to the Arkansas Medical Society, took the form of a Christmas party and was held Wednesday afternoon, December 19, at the home of Mrs. Wm. R. Bathurst, on Prospect Avenue. A short business session was presided over by Mrs. Stacy Howell, in the absence of Mrs. J. C. Cunningham, President. The assistant hostesses, Mrs. S. B. Hinkle and Mrs. T. M. Fly, also served as program chairmen and presented Miss Mabel Smith in a group of voice selections including: "Song of India," by Rimsky Korsaska, "Just a Memory," by De Sylvia and Penn's "Mistress Marguerite." Miss Smith was accompanied by her mother, Mrs. W. F. Smith. Miss Margaret Peters and Miss Katherine Bush were presented in dance numbers, with Miss Mildred Ramsey at the piano. Miss Margaret Rogers was heard in a group of readings. Delicious refreshments were served in the dining room, from a table attractive with Christmas flowers. Mrs. C. W. Garrison and Mrs. Homer Scott poured, and were assisted by various members.

The secret of happiness is not in doing what one likes, but in liking what one has to do.—James M. Barrie.

Every man can find pleasure in his work if he chooses to look for it—Henry L. Doherty.

Obituary

HUDDLESTON, GEORGE DAVIS—Dr. G. D. Huddleston of Conway died January 3, 1929. Aged 66. Dr. Huddleston was born in Dallas County, January 28, 1862. When a small boy he moved to Franklin County, where he was reared. He was educated for the medical profession in Vanderbilt University, Nashville, Tenn., and Tulane University, New Orleans, La. After graduation, in 1889, he located at Lamar, where he practiced medicine until 1914, moving to Conway. He was formerly a Hendrix College physician.

Dr. Huddleston is survived by his widow, two daughters, Mrs. Dean D. McBrien of Conway and Mrs. Robert L. Lambert of Tulsa, Okla.; two sons, George D. Huddleston, Jr. of Pine Bluff and William Huddleston of Conway, a student at the University of Nebraska, Lincoln.

McMURTREY, JOHN S.—Dr. J. S. McMurtrey, Rison, died December 23, 1928. Aged 75. Dr. McMurtrey was born and reared near Rison, and had practiced medicine in Cleveland County for fifty years.

He is survived by his widow, three daughters, Miss Mamie McMurtrey, Mrs. Victor Boggs and Mrs. Donathan Wyatt, all of Rison; one son, Jessie McMurtrey of Crossett.

HART, JAMES DOGAN—Dr. J. D. Hart, Dardanelle, a former member of the Arkansas Medical Society, died Saturday, December 15, 1928. Aged 65. He is survived by two brothers, Jeff C. Hart of Little Rock and Bob Hart of Tulsa, Okla., and one sister, Miss Janie Hart of Little Rock.

PADDOCK, CHARLES B.—Dr. C. B. Paddock of Fayetteville died January 3, 1929. Aged 66. Dr. Paddock had lived in Fayetteville since 1871. He was the son of Dr. Samuel Farwell Paddock. He was educated in the University of Arkansas, and received his medical training in the University of Louisville. The year after his graduation he was given an honorary degree for special graduate work.

He is survived by his wife, a daughter, who lives in Rochester, Minn., and a son, C. B. Paddock, Jr., who also is a practicing physician in Fayetteville.

County Societies

WHITE COUNTY

(Reported by F. P. HARDY, Secretary)

The White County Medical Society held its first meeting in Searcy, January 3, 1929.

Present: D. W. Sloan, J. R. Sloan, Havenner, Jones, Parker, Moore, Spain, Allbright, Peeler and Hardy.

Dr. C. M. Peeler made a very comprehensive report of four cases of Cerebrospinal Meningitis, which elicited animated discussion.

Officers elected: President, D. W. Sloan; Vice-President, J. L. Jones; Secretary (re-elected) F. P. Hardy; Delegate, S. J. Allbright.

The next meeting will be in Beebe, February 7, at 7:30 p. m.

Book Reviews

Gonococcal Infection in the Male.—By Abr. L. Wolbarst, M. D., Urologist and Director of Urologic Clinics, Beth Israel Hospital, with a chapter written by J. E. R. McDonagh, F. R. C. S., Surgeon, London Lock Hospital. Eighty-one illustrations, including seven color plates. Published by The C. V. Mosby Company, St. Louis, Mo., 1927. Price, \$5.50.

The object of this book is to record the advance in our knowledge of male gonorrhea in such a manner as to offer to the medical profession, a working familiarity with the present day methods of diagnosis and treatment, based largely on the author's extensive experience.

Nasal Neurology, Headaches and Eye Disorders.—By Greenfield Sluder, M. D., F. A. C. S., Clinical Professor and Director of the Department of Oto-Laryngology, Washington School of Medicine, St. Louis. With 167 illustrations, including 2 color plates. Published by the C. V. Mosby Company, St. Louis, 1927. Price, \$11.50.

Dr. Sluder states in the preface of this book why he has chosen the title "Nasal Neurology, Headaches and Eye Disorders." He says, "for this monograph with the special intention that it may attract the interest of neurologists, internists and ophthalmologists to a greater extent than the customary treatise on rhinology. Rhinology is sadly in need of this co-operation for two very definite reasons, namely, in order to secure clinical co-operation in obscure neurological cases and in order to obtain post-mortem material in which the life history of the individual is definitely known.

International Clinics.—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume III. Thirty-Seventh Series, 1927. Published by J. B. Lippincott Company.

One of the interesting articles in this issue is on Colitis: Catarrhal, Mucous, Ulcerative by Thomas R. Brown, M. D., Associate Professor of Clinical Medicine, Johns Hopkins University. He divides the subject in such a manner that keeps your interest throughout the article. He says that many cases of so-called appendicitis are in reality cases of localized colitis. On this subject he further says: "It is a wise rule never to diagnose chronic appendicitis, and never to operate upon such a case without a history, definite or perhaps even indefinite, localized or with referred symptoms, which may be regarded as a probable attack of acute or subacute appendicitis."



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(Adv.)

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LITTLE ROCK, ARK., FEBRUARY, 1929

No. 9

SYNERGISTIC ANESTHESIA IN OBSTETRICS*

C. B. BILLINGSLEY, M. D., Fort Smith

Synergistic anesthesia, as the name implies, is one that has two or more drugs or agents acting in a complementary capacity.

The writer first observed the use of this anesthesia in the Clinics of Dr. Brown, Professor of Obstetrics in Tulane Post-Graduate School of Medicine, New Orleans, and came into intimate contact with it in the obstetrical wards of the Charity Hospital, where it is being used in childbirth.

For the last three years we have used it routinely in St. John's Hospital, Fort Smith, Arkansas, and in private practice. The relief of the awful agony of childbirth has been a question that has entertained some of the master minds of medicine since Sir James Y. Simpson, of England, first used an anesthesia in his obstetrical practice in 1847. Channing, of Boston, a short time after, first used anesthesia in obstetrics in America. Since that time, many able men have spent much thought and time on the perfecting of an anesthesia that would give at least some surcease from pain, and at the same time not harm the mother or the child.

Chloroform has been used, and abused, more possibly than any other form of anesthesia. The "Blue-babies" and postpartum hemorrhages, which follow in its wake, have discouraged most of its users, except to tide over the last few agonizing moments of the second stage of labor. Gas has been, and is still being used, but is not practical, except in the hospitals.

Nerve blocking or lumbar anesthesia had its wave of popularity; but on account of an

occasional injury to the spinal cord, with its consequent paralysis of the mother's lower extremities, it has been practically abandoned.

Scopolamin-Morphine, or the "twilight sleep" anesthesia, so widely known and heralded by the lay press a few years ago, has gone into the scrap heap on account of the high mortality among the babies, and the hysterical manifestations in the mother. We believe, then, that in presenting the formula and modus-operandi of synergistic anesthesia, that the majority of the objectionable features of other anesthetics have been removed; but, like all other agents used for relief of human ills, it is not perfect in its action in all cases. The rectal formula is as follows:

Quinine Hydrochloride.....	grains	20
Alcohol	drams	2
Olive Oil, q. s.	ounces	4
Ether	ounces	2½

This oil and ether preparation should be freshly prepared. The similar stock preparations on the market are not trustworthy for obvious reasons. Your druggist can combine the quinine-alcohol (solvent) and the olive oil, and allow you to add the ether when ready to use. Thus it is fresh and potent.

The first step to be taken when you find the mother in labor, is to give an ss. enema, introducing a colon tube if necessary, to get a complete return, freeing the colon of all fecal matter.

When the pains are coming every ten or fifteen minutes, or if you care to make a vaginal or rectal examination, the cervix has one or two fingers dilatation, morphine ¼ grain, and 2 cc. 50 per cent solution of sulphate of magnesia are given intra-muscularly. The synergistic or complementing effect of this salt should be taken advantage of by repeating every hour or two or until that time when your patient is riding over the sedative effect of your first hypo. When the general demeanor of your patient shows she is soon going into

*Read by title before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

the second stage, or upon examination there is two or three fingers dilatation, ether formula should be begun.

It is best given by turning patient on her left side; flexing the knees well on the abdomen; advising the nurse or attendant to support the abdominal tumor firmly, at the same time instructing the mother not to hold her breath or "strain down," but to remain as inert and relaxed as possible. It is well at this time to tell the patient that a great deal depends on her co-operation if she expects to get through without much pain. Also acquaint her with the fact that when the formula is introduced she will have a desire to stool for awhile, but that will soon wear off and she will be comfortable. A No. 14 or 16 catheter is introduced into the bowel, using care to get beyond the head or presenting part, and also see that your catheter does not buckle up in the rectal pouch.

Olive oil, $1\frac{1}{2}$ ounces should first be introduced by funnel and gravity, or by all-glass syringe, followed by the oil and ether formula, which should be given very slowly, taking 10 or 12 minutes to introduce. Clamp the catheter and place a sponge wet in olive oil over the anus for fear some of the ether may escape and annoy the patient. Make room dark and quiet, and place cotton in ears to reduce acute audition.

The patient remains on the side for a few minutes longer, the abdomen still being supported by the attendant, and the mother encouraged not to strain or try to stool. Soon her relaxation is accomplished, she is sleepy or talkative, and the ether can be detected on the breath. At this time the patient may be placed again on the back and the catheter removed very gently and between pains.

The usual routine, as outlined, may not be given. The obstetrician may be called too late to use the morphine and sulphate of magnesia, or not have time to use anything but the rectal instillation. It is suggested that the initial morphine and sulphate of magnesia be given while the enema is being given, followed immediately with the oil and ether.

The obstetrician will keep in mind the end to be obtained—namely, as near as possible a painless childbirth, and so shape his course.

It has been found that it takes from four to six hours for $2\frac{1}{2}$ ounces of ether to be absorbed by the colonic mucosa, and that on account of this fact, the patient is never deeply anesthetized; but stays, as a rule, in a com-

fortable state, usually waking up and fully co-operating with the pains, and full co-operation at this time should be encouraged.

In some cases, the anesthesia seems to slow down the progress of labor. It is then that one is justified in giving two or three minims of pituitrin. If the patient shows some pain as the presenting part is passing over the perineum, a few whiffs of chloroform may be allowed; but as a rule, she remains in a semi-conscious condition, and rarely ever cries out.

Some of our best obstetricians assert, and it is the experience of the writer, that the babies are born just as alive and strong and are just as easily resuscitated, if not breathing, as when no anesthesia is used. Also post-partum hemorrhage, so often seen in some forms of anesthesia, is not increased, and in my experience in 80 cases, has never occurred. The slow and persistent action of the anesthesia, and the fact that it can be discontinued by a small enema any time for any reason, is an advantage not to be despised.

In the hands of experienced obstetricians, it has been found that lacerations are rather rare, even in primiparas. This is on account of the grateful relaxation, allowing the baby to be delivered between pains. If lacerations do occur, repair can be made and cause the mother very little, if any pain. Additional anesthesia in this procedure is not usually necessary.

A great advantage in this form of anesthesia, in obstetrical practice, is found in the fact that it can easily and safely be used in the private homes where hospital service is not practical, or is denied. Obstetricians who are using this anesthesia, and hospitals over the country that are advertising the fact that it is used in their institutions, have proven that synergistic anesthesia in obstetrics has passed the experimental stage, and portends its widespread popularity and general use in the near future. Until the medical mind finds a safer, surer and better anesthesia, this form of relief of pain, in that dismal hour, when our mothers literally go down in the "valley of the shadow of death," will take its place among the other agents, pointing to the relief of human ills, and the promotion of human happiness.

CONCLUSIONS

- (1) Safe for the mother.
- (2) May be discontinued at any time by small ss. enema.

(3) Reduces per cent of lacerations, by thorough relaxation.

(4) Reduces the degree of shock attendant to birth.

(5) Adaptability to hospital and private practice.

(6) Does not increase tendency to post-partum hemorrhage.

(7) Does not injure baby.

REPORT CASE ABDOMINAL ANEURYSM

GORDON HASTINGS, M. D.
F. O. MAHONY, M. D.
El Dorado

Patient, a colored female, domestic servant of 52, on September 16, 1926, requested medical service. She complained chiefly of general malaise, loss of weight, asthenia, sore throat and mouth, and a skin eruption. Physical examination showed usual findings for insidious pellagra, along with a rather profuse leukorrhea, which was taken as a Neisserian infection. Physical otherwise obviously negative and the usual treatment was instituted. The patient later seemed to be improved.

On September 23, 1926, patient was taken rather suddenly worse. At this time the physician requested urinalysis, which showed slight trace of albumin with occasional granular and hyaline casts; blood pressure 106-65. A diagnosis of interstitial nephritis was made and the customary treatment begun. On October 8, the urinalysis continued to show albumin and casts sp. gr. 1008.

November 6—urine negative, B. P. 126.

November 16—reported improving.

December 6—reported improving.

The patient was not heard from again for three months, at which time, a new syndrome had developed. Her chief complaint at this time was dragging pain associated with a feeling of weight and a lump in left side, the latter of which was of short duration. Physical examination showed marked emaciation, asthenia and undoubtedly moribund, rapidly progressing toward imminent dissolution. Skin showed evidence of what was taken to be either

previous pellagra or syphilis, or both. Mucous membrane pale; eyes, ears, nose and throat essentially negative; chest showed marked emaciation. Moderate rachitic development. Respiratory excursion symmetrical but shallow, due to pain upon deep inspiration. Few scattered rales in both bases; breath sounds normal percussion showed normal pulmonary resonance. There was no cough and patient complained of no deep thoracic pain; cardiac sounds weak and of poor muscular element. There was no cardiac asthma; the pulses were thought doubtfully to be unequal in rate. There was undoubtedly an arrhythmia of rate force and volume. Heart sounds persistently irregular, which was taken to be auricular fibrillation; no cardiac hypertrophy; no valvular lesions. Examination of chest otherwise of no significance; abdomen rather scaphoid; no ascites; no shifting dullness; liver not palpable and with normal dullness upon percussion. Left upper quadrant showed pulsating tumor synchronous with the heart sounds which, upon palpation, seems to be about the size of an orange. A mass seemed to project from under the left costal margin extending from a position in close proximity to the left mamillary line to the lumbar region where its own dullness was lost by extending into the normal lumbar dullness. Its lower border encroached on a line drawn transversely through the umbilicus. The area over the mass showed marked cutaneous hyperesthesia. Patient was tender upon palpation and complained bitterly when pressure was made. She persistently assumed a right-sided recumbency. She was exquisitely tender about region of left lumbar spine and complained of darting paroxysms of pain extending upward to the left shoulder and not infrequently downward as far as the left femoral region. No other palpable masses noticed. Left femoral pulse wanting; right present, but rather faint.

Unfortunately, the use of a stethoscope over the tumor was inadvertently omitted. No genital examination was made; extremities with the exception of marked emaciation were essentially negative.

Impression:

- 1—Abdominal aortic aneurysm
- 2—Syphilis
- 3—Arteriosclerosis
- 4—Chronic myocarditis
- 5—Chronic interstitial nephritis
- 6—Polycystic kidney

*Read before the 53rd Annual Session of the Arkansas Medical Society, El Dorado, May 1-3, 1928.

- 7—Splenomegaly
- 8—Pedunculated leiomyoma
- 9—Pyonephrosis
- 10—Fecal impaction

Because of the rarity of aneurysm attacking the abdominal aorta one would be rather reluctant in making positive diagnosis of such. Then too, the tumor mass being so distant from aorta makes one uncertain due to the enormousness of the thing. The possibility of an aneurysm attacking the splenic artery was suggested but dismissed due to the absence of knowledge of such a case previously reported. A differential diagnosis seems to eliminate all the possibilities with exception of an abdominal aortic aneurysm. A tentative diagnosis was thus made, however, with some reservation.

Postmortem: For sake of securing correct diagnosis permission was granted for performance of a postmortem examination. For sake of brevity an excerpt is herewith given relative to the pathological findings. A mid-line incision extending from epigastrium to the mons pubis was made. No free blood; no evidence of internal hemorrhage; left kidney rests upon a mass easily palpated about size of a large orange. The tumor a sacculated aneurysm on a level with third and fourth lumbar vertebrae was found. The tumor was almost completely filled with superimposed layers of organized clot. This clot was extremely friable and crumbled between the fingers. Dilated aortic wall apparently did not surround the tumor and obviously through constant growth of the mass it ruptured and edges retracted. The possibility of such a ruptured wall seems doubtful for it seems improbable that the force of the cardiac contraction could be sustained by such a thing as an organized clot of blood. I am of the opinion that the aorta was ruptured at the time the aneurysm was dislodged. There was no evidence of either past or present intra-abdominal hemorrhage.

THE DENTIST A NECESSARY BLESSING*

J. H. McCURRY, M. D., Cash

I must say that I appreciate the honor conferred upon me to address you on this occasion. It is indeed a pleasure and double

honor to be associated and identified with two so noble, necessary, and indispensable professions as are represented here tonight.

The only displeasure I really feel is with the title assigned me by some one, I know not who, "The Dentist A Necessary Evil." This title creates a false and bad impression and a bad impression is one impression that all dentists detest. I object to this title and have departed from the time honored custom and placed it at the bottom in a modified form instead of at the top.

The dentist is as indispensable and necessary in his branch as is the physician. While the profession of dentistry is not as old and does not encompass as broad a field, he fills a niche, a long felt want as it were, and is our best friend and ally. He is just as progressive every passing year, nay every passing month brings to light and knowledge new and important methods that spell for humanity greater blessings of comfort and health.

The dentists require long educational preparation in academic school, four years in dental college just as severe as is required of the physician.

Our American dentists have some great honors to their credit. From information at hand, I find they have the distinction of having organized and put in operation the first Dental College in the world. This was the Baltimore College of Dental Surgery founded in 1839. In the invention and manufacture of dental instruments, America has taken the lead.

America has always excelled in mechanical art and contrivances and it is therefore but natural that the American dentist has led the world in this branch of the profession.

We, as physicians, must acknowledge the dentist our superior from a financial point of view. The dentists have established a cash and carry system; they get the cash and let their patrons furnish the system. We furnish the system and let a lot of our patients carry the cash. A physician will do a large practice and become proficient, but often poorer. A dentist can do a larger practice and may not become proficient, but he cannot do a small practice without becoming rich.

Most dentists in fact all, lay claim to being painless and have been making heroic efforts to get the public to believe it. Not being successful, they have adopted a new plan by first claiming that Eskimos enjoy pain. Now, they want to claim all people do, but

*Read before the Craighead County Medical Society, Jonesboro, February 2, 1928.

Rube Goldberg seems to think differently. He says, "I know that I would surely grin and laugh away dull care, if I could see my dentist in another dentist's chair." Seriously, dentists, like the physicians, are greatly and sometimes wrongfully maligned.

Prior to the advent of anesthesia, all modes of operations were so very painful that complaint was often justifiable; but now with the various obtundents for local use and the effective general anesthetics, this objection has been practically overcome.

The birth of dentistry as a distinct and definite profession occurred less than a century ago. I know of no other profession that has gained so many laurels in so brief a time. We are taught that there is a cause for every effect. There are several factors that have helped to elevate this profession to its present high standard. I will mention their beneficial and elegant work in prostheses or replacing absent parts, as teeth. The manufacture of teeth and bridges has become so skilled and proficient that these replacements are fully as strong and often more beautiful than the ones provided by Nature.

In dental materia medica and therapeutics, progress has been most marked. In earlier days the surgical branch of the profession was given most attention and, the dentist's thought was only to remove the diseased parts. The modern idea is to preserve, to heal, and to prevent disease when possible.

So we see the dentist plays the part of a valiant soldier ever standing sentinel at the port of entry of the largest danger zone of the body.

I take pride in paying homage and esteem to one of the most worthy, eminent, proficient and progressive professions in existence.

So instead of "The Dentist a Necessary Evil" I proclaim

"The Dentist a Necessary Blessing."

High school students will have the chance this spring to write of the character and achievements of a former President of the American Medical Association, according to an announcement from the headquarters of the Gorgas Memorial Institute in Washington.

As a means of bringing the life of Dr. William Crawford Gorgas, the medical hero of

Panama, to the attention of the younger generation through high school essay contests, prizes aggregating \$2,500.00 have been provided through the courtesy of Charles R. Walgreen of Chicago. Local, State and national prizes are afforded.

The high school contests for local prizes close March 1, the State selection will be made April 15, while the national winner will be chosen on May 15. The final successful contestant will go to the national capital to receive the grand cash prize from the President of the United States, who is Honorary President of the Institute.

This national essay undertaking is a part of the educational plan of the Gorgas Memorial to arouse interest in the achievements of scientific medicine and to encourage added co-operation of the public with this profession.

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WILLIAM R. BATHURST, Editor
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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the state, changes of location, etc., are requested.

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Editorials

OBSTETRICS AND THE MEDICAL COLLEGES

(Contributed by J. P. RUNYAN, M. D.
Little Rock)

Dr. Palmer Findley of Omaha, President of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, in his address read at the recent meeting held in Toronto, Canada, had for his subject "Teaching of Obstetrics." He called attention to the time given obstetrics in proportion to surgery, both in the curricula and clinics in the medical colleges in the United States.

The excellent article is published in full in the November issue of their official organ. According to Dr. Findley, the services of the general practitioner, the figures being taken from the report of the Committee on Maternal Welfare in 1925, are proportioned as follows: "Internal medicine 50 per cent, obstetrics 35 per cent, minor surgery, fractures, etc., 15 per cent." But the curricula of medical schools provides in teaching hours, the ratio of obstetrics to general surgery as 4 to 18. Besides the discrimination in favor of surgery, Dr. Findley contends that much time is wasted in surgical study hours in lesser phases of surgery which might as well be left to graduate schools.

We are much given to boasting of the superiority and efficiency of our medical colleges and of our conquests over certain diseases, thus reducing the average mortality. Arthur Brisbane, whose daily syndicated articles in the newspapers sometimes tell something worth while and at other times are merely amusing as vainglorious bragging, during the recent serious illness of King George, absurdly derided the able physicians who attended the royal patient and told how in this great country, physicians would have put the King on his feet in short order by blood transfusions, indicating to the average reader that England's greatest medical scientists were incompetents, whose feeble efforts were likely to shorten the possible days of his Majesty. Incidentally, it will be borne in mind that King George is recovering his health and strength. But with all our braggadocio the fact remains that the maternal mortality is one-third higher in the United States than in England and Wales, twice as high as in what we call inferior nations as Denmark,

Italy, Japan, Sweden and New Zealand, and ranks highest in 21 of the leading nations. And, worse still, in spite of the decline in some diseases, the maternity mortality, 6 per 1000, has shown no decline whatever in the last fifteen years.

One reason, probably the most potent one, lies in the disproportionate attention given to obstetrics in our medical colleges, not only as compared with the time devoted to surgery, but as compared with the colleges of other countries. Thus in Bolshevik Russia, Poland, Ecuador and Argentina the proportion is 50-50 as between obstetrics and surgery; and in England, Scotland, Wales, Canada, Australia, Egypt, India, Chile, Peru, Austria, Mexico and China surgery is given a 2 to 1 advantage over obstetrics and gynecology, while in the United States the proportion of teaching hours in surgery to obstetrics is $4\frac{1}{2}$ to 1.

Because of this disproportion in teaching hours as well as in the lack of clinic and maternity wards, it is easily conceivable that the young graduate begins his practice not well equipped in this most important branch of his profession, either by teaching or experience. Any emergency may arise—convulsions or ruptured uterus, contracted pelvis and being thrown upon his own resources, no time to summon consultants, he must think and act quickly. Dr. Findley holds that the student should officiate in actual deliveries in at least 20 cases before graduation. Then he will be prepared to meet emergencies. Great advances have been made in lowering infant mortality; none at all in fifteen years in maternity mortality. If an infant dies that is but one life. If a young woman succumbs in childbirth, a potential mother of a large family is destroyed. Is it not as important to conserve life at its source as to conserve infantile life a little later?

Dr. Findley suggests as the remedy for present conditions a more equitable ratio of study hours as between surgery and obstetrics, more clinics, more beds in maternity wards of hospitals, more opportunities for pre-natal supervision of expectant mothers in addition to serving more frequently at deliveries.

In addition to the valuable statistic and sensible suggestions for improvement of present conditions, Dr. Findley goes into the history of obstetrics, which as a science, finally supplanted the activities of the mid-wife, frequently an old granny, ignorant, illiterate, with absolutely no knowledge of even the

fundamentals of hygiene and sanitation. The prudish folks of even as late as the eighteenth century held the idea in abhorrence of a male physician attending a woman in labor. A bit earlier a physician of Hamburg, Germany, was burned at the stake for so doing. As late as 1850 when Dr. James P. White conducted an obstetric demonstration in a clinic in the Medical Department of the University of Buffalo, N. Y., it was held up as an outrage against all decency and propriety by the press and even by those of his own profession. The science of obstetrics has made much progress since those dark days, and it should not lag now. Every word of Dr. Findley's admirable paper is of interest. It is to be fervently hoped that the American Medical Association and all State Societies will take up his suggestions and put the United States in line with the other countries of the world in this vital branch of medical science.

ALIENISTS DIFFER ON HARSH'S SANITY

The above is cited from a headline in a newspaper in reporting the trial of a wealthy young student at Atlanta, charged with killing a drug clerk when he resisted being held up.

A headline is supposed to convey news. But, unfortunately, there is no news in that headline. It was Dana, of the New York Sun, who explained the nature of news as follows: "If a dog bites a man that is not news; but if a man bites a dog that is news."

And so it is with the matter of alienists in a murder trial. It would be news indeed should alienists on both sides be in agreement as to the sanity of a defendant. The usual procedure is for the alienists for the State and the alienists of the defense to take exactly opposite views based on the same hypothetical case presented as a basis for judgment. That is what shakes the confidence of the public in the ability or the honesty of expert witnesses and which caused a federal judge to express the opinion in court that expert testimony was the most unreliable of any evidence. The one plan to get rid of this farce in courts is for the State to employ the expert and thus secure unbiased opinions.

Abstract

INDICATIONS FOR THERAPEUTIC STERILIZATION IN OBSTETRICS

J. Whitridge Williams, Baltimore (Journal A. M. A., Oct. 27, 1928), discusses the indications for therapeutic sterilization in obstetrics. For practical purposes, the means of producing permanent sterilization are restricted to operations on the tubes and the uterus. Theoretically, tubal sterilization may be effected by one of the following procedures; (a) simple ligation; (b) double ligation and section between the ligatures; (c) section of the tube, and burial of its proximal end between the folds of the broad ligament or in the depths of the uterine musculature; (d) excision of the entire tube; (e) excision from the uterine cornu, and (f) various procedures for so displacing its lateral end so that ova cannot gain access to it. The only practical routine method of tubal sterilization consists in excising its proximal end from the uterine cornu by a wedge-shaped incision, and carefully closing the wound with fine sutures. This procedure is readily applicable in pregnant as well as nonpregnant women. In the early months, it is done after emptying the uterus by abdominal hysterotomy, and in the latter months following cesarean section. The results are satisfactory, as the only possibility of failure consists in the formation of a fistulous tract in cases in which an old inflammatory process of the uterine cornu or of the proximal end of the tube has been overlooked. Sterilization can be effected either by complete or by supravaginal hysterectomy, and ordinarily the latter is preferable on account of its simpler technic. If the patient expresses the desire to continue menstruating, Williams sterilizes her by excision of the tubes, but, if she is indifferent in the matter, he amputates the uterus and leaves the ovaries and tube in situ, feeling sure that the convalescence will be smoother than if the more conservative procedure were adopted. Likewise, when sterilization appears advisable before the child has reached the period of viability, or even in the nonpregnant woman, he pursues the same course. Williams has sterilized twenty-eight women suffering from chronic nephritis. Nine were delivered by cesarean section at or near term, of whom four were sterilized by means of supravaginal amputation of the uterus and five by cornual excision of the tubes. Furthermore, nineteen were sterilized before the pe-

riod of viability was attained; twelve by supravaginal amputation and seven by abdominal hysterotomy followed by excision of the tubes. The next most common indication was afforded by serious disease of the heart, which was considered incompatible with further pregnancies. Two-thirds of the sterilizations were effected by radical intervention and the remainder by excision of the tubes. Tuberculosis afforded the indication for intervention in nine patients, and in each sterilization was effected relatively early in pregnancy; eight times by the radical and once by the tubal technic. All of these were multiparous women in whom attempts at contraception had failed, and intervention was done not so much in the hope of curing the disease as to prevent its exacerbation in subsequent pregnancies and thereby to preserve the woman to care for her family as long as possible. Williams says that he has become increasingly conservative regarding the induction of abortion in tuberculous women. During the past seven years he sterilized nineteen patients for mental or psychiatric or so-called social indications: Four cases, pronounced feeble-mindedness; four cases, dementia praecox; three cases, epilepsy; two cases, frank psychosis; one case, chorea and repeated puerperal insanity; one case, postencephalitic depression, and four cases, social indications. Dangers of sterilization are slight, and are those incident to an ordinary abdominal operation. In the author's series there was one death, years ago, following tubal sterilization incident to a conservative section. The operation is not always successful. Following amputation of the uterus the only possibility lies in the accidental formation of a fistulous tract through the cervical stump as the result of infection. On the other hand, following cornual excision of the tubes, the danger is somewhat greater, as in such cases one has to consider not only the possibility of fistulous tracts due to imperfect technic, but also those resulting from unrecognized chronic inflammatory processes in the uterine portion of the tubes. Williams believes in the justifiability of contraceptive advice under proper conditions, as the more radical procedure of sterilization could be justified only after the former had failed, or in case the patient is too unintelligent to follow it. He believes contraceptive advice should be given whenever it is medically indicated, but that it must depend on the conscience as to what advice should be given under other

conditions. It is just as much the physician's duty to give such advice when medically indicated as it is to advocate the employment of any other prophylactic measure. In his experience, contraceptive advice will usually accomplish its purpose among the so-called intelligent classes, but it is almost useless among the ignorant, feeble-minded and brutal, and it is in the latter particularly that one must go still further and effect sterility by operative means when necessary. He feels very strongly that state and national laws should be amended so as to make it possible for physicians to prescribe contraceptive means with the same freedom and decency as any other prophylactic or medical device, and he resents very strongly the attempt of the government to interfere in this respect, as he regards it as an unwarrantable aspersion against the integrity and bona fides of the medical profession.

Personal and News Items

The board of the Davis Hospital, Pine Bluff, January 12, elected the following staff: Dr. C. K. Caruthers, Dr. Harry E. Williams, Dr. B. D. Luek, Dr. W. G. Pittman, Dr. Paul H. Power and Dr. A. A. Hughes.

The 54th annual session of the Arkansas Medical Society, will be held in Hot Springs May 7-8-9. Anyone wishing to prepare a paper for this meeting should write Dr. R. J. Calcote, Donaghey Building, Little Rock.

At the recent annual meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas, Dr. A. S. Buchanan of Prescott was elected president. Other officers elected are as follows: Vice-President for Louisiana, Dr. Jacob M. Bodenheimer, Shreveport; Vice-President for Arkansas, Dr. L. M. Lile, Hope; Vice-President for Texas, Dr. Joseph Beeton, Greenville; Secretary, Dr. Frank H. Walke, Shreveport, re-elected; Councilors: Arkansas, Dr. H. H. Niehuss; El Dorado; Texas, Dr. A. B. Small, Dallas; Louisiana, Dr. George Wright, Monroe.

Marshall, Texas, was selected for the session of 1930.

Dr. Henry Thibault of Scott, who has been at Kerrville, Texas for some time under care of Dr. Sam Thompson, is reported as improving.

At the meeting of the Pulaski County Medical Society held February 4, Dr. Ray B. Balyeat of the Balyeat Hay Fever and Asthma Clinic, Oklahoma City, presented a lantern slide discussion on "The Diagnosis and Treatment of Allergic Diseases, with Special Reference to Hay Fever and Asthma."

The Miller County Medical Society elected the following officers for 1929:

President, J. T. Robison; Vice-President, W. P. Gardner; Secretary-Treasurer, Herman Castile; Delegate to State meeting, L. J. Kosminsky; Alternate, L. H. Lanier, Censor, H. E. Murry.

Dr. Jerome Wright of Russellville, who has been under treatment in a Memphis hospital for osteomyelitis, has returned to his home. It was found necessary to amputate his right leg above the knee.

The following extract giving account of the palliative medical treatment given to George Washington, in his last illness, is from "Washington's Legacies" published in 1800, a copy of which is in possession of E. D. Bird of this city, to whom we are indebted for the courtesy of a transcript:

Alexandria (Virg.), December 21, 1799.

PARTICULAR ACCOUNT OF THE LATE ILLNESS AND DEATH OF GEORGE WASHINGTON

Some time in the night of Friday, the 10th instant, having been exposed to a rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the wind pipe, called in technical language Cynaehe Trachealis. The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough, and a difficult, rather than a painful deglutition, which were soon succeeded by fever and a quick and laborious respiration. The necessity of blood-letting suggesting itself to the General, he procured a bleeder in the neighborhood, who took from his arm in the night twelve or fourteen ounces of blood. He could not by any means be prevailed on by the family to send for the attending physician till the following morning. He arrived at Mount Vernon at about 11:00 o'clock on Saturday. Discovering the ease to be highly alarming, and foreseeing the fatal

tendency of the disease, two consulting physicians were immediately sent for. They arrived, one at half after three, and the other at four o'clock in the afternoon. In the meantime were employed two pretty copious bleedings, a blister was applied to the part affected, two moderate doses of calomel and an enema were given, but all without perceptible advantages, the respiration becoming still more difficult and distressing.

Upon the arrival of the first of the consulting physicians, it was agreed, as there were yet no signs of accumulation in the bronchial vessels of the lungs, to try the result of another bleeding, when about thirty-two ounces of blood were drawn, without the smallest apparent alleviation of the disease. Vapors of vinegar and water were frequently inhaled, ten grains of calomel were given, succeeded by repeated doses of tartar emetic, amounting in all to five or six grains, with no other effect than a copious discharge from the bowels. The powers of life seemed now manifestly yielding to the force of the disorder; blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning, now became almost impracticable. On Saturday night, retaining the full possession of his intellect he expired without a struggle.

He was fully impressed at the beginning of his complaint, as well as through every succeeding stage of it, that its conclusion would be mortal; submitting to the several exertions made for his recovery, rather as a duty, than from any expectation of their efficacy. He considered the operations of death upon his system as coeval with the disease; and several hours before his death, after repeated efforts to be understood, succeeded in expressing a desire that he might be permitted to die without further interruption.

During the short period of his illness, he economized his time, in the arrangement of such few concerns as required his attention, with the utmost serenity; and anticipated his approaching dissolution with every demonstration of that equanimity for which his whole life had been so uniformly and singularly conspicuous.

JAMES CRAIK,
Attending Physician.

ELISHA C. DICK,
Consulting Physician.

FEE SPLITTING

In an address before the New York Academy of Medicine Dr. John A. Hartwell, president of the academy, has called for a little house-cleaning in the medical profession. Millions of people who must patronize medical practitioners will wish him success in this undertaking. After stating that the practice had become so complex that the general practitioner "is required to call upon the specialist for many services that formerly he accomplished himself," Dr. Hartwell condemned the practice of fee-splitting. He said:

In essence, fee-splitting amounts to the family doctor receiving a rebate from the specialist for a service for which he is charging a separate fee, without the patient knowing that such a rebate is being paid * * * No right-minded man can justify this, and disaster if not disgrace threatens the profession if it is tolerated.

The medical man is being widely charged today with an increasing spirit of commercialism. Everyone who respects his great profession deplores any justification for this charge. Fee-splitting has undoubtedly been one of the causes for this growing conviction on the part of the public.

Dr. Hartwell's further suggestion that something should be done toward "supplying of cheap hospital accommodations to persons with moderate incomes," will be welcomed by every hospital chaplain or other person familiar with hospital life. He is right in saying that, under present conditions, the rich and poor are in better position to secure adequate accommodations than those with moderate incomes.—*The Churchman.*

INFLUENZA "PREVENTIVES" AND "CURES" ARE FRAUDULENT, FEDERAL DRUG OFFICIAL WARNS

"It is the intention of the Food, Drug and Insecticide Administration to take immediate action under the food and drugs act against all preparations represented by label or by circular accompanying the package as preventives or treatments of influenza, la grippe, pneumonia, and related diseases," W. G. Campbell, Director of Regulatory Work of the United States Department of Agriculture, said today.

"There is a widespread and probably a fully justified public apprehension about influenza

and some manufacturers have not hesitated to take advantage of this situation by advertising their preparations in every available quarter as preventives or cures for the disease. Unfortunately, the food and drugs act does not reach false advertising statements appearing in the press, or in any advertising medium not included with the package of the preparation itself. The food and drug enforcing authorities are therefore powerless to check such misleading advertising, serious as the consequences may be in the case of those who are led to depend on such ineffective products and neglect the hygienic precautions recommended by public health authorities such as isolation, rest, sleep, diet and proper ventilation.

"It is a fact generally accepted by medical authorities, based on world-wide medical experience," added Mr. Campbell, "that there is no known drug or combination of drugs which will prevent or cure influenza. Products labeled as effective for this purpose will unhesitatingly be classed as misbranded within the meaning of the food and drugs act and treated accordingly.

"It may not be amiss to add," said Mr. Campbell, "that manufacturers are usually cautious about putting unwarranted claims upon the labels of their products, knowing that they render themselves liable under the food and drugs act, and those who are inclined to take advertising claims at face value will frequently find that the labels themselves, or the circulars accompanying the packages of the drugs, do not repeat these claims."

ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER AT DAYTON

The annual meeting of the American Association for the Study of Goiter will be held this year at Dayton, Ohio, on March 25, 26 and 27. The primary object of this association is to bring together each year men who are especially interested in the study of goiter and its associated problems. Members of State and provincial medical societies are eligible and cordially invited to participate as attending members.

The first day of the meeting will be given over to diagnostic clinics in the morning and several short papers during the afternoon chiefly concerned with recent experimental work. On the second day, operative clinics will be held at the Miami Valley Hospital,

St. Elizabeth's Hospital and at the Soldiers' Home Hospital. The afternoon of the second day and the morning and afternoon of the third day will be given over to the presentation and discussion of scientific papers.

The headquarters will be at the Hotel Miami. Dr. William Ewing is President of the Montgomery County Medical Society under whose auspices the meeting is to be held. Dr. E. M. Huston is the General Chairman of the Committee on arrangements. Dr. H. C. Haning is Chairman of the Hotel Committee. All communications in regard to hotel reservations should be addressed to Dr. Haning at the Reibold Bldg., Dayton, Ohio.

ANNUAL MEETING OF THE MISSOURI PACIFIC SURGEONS

The annual meeting of the surgeons of the Missouri Pacific Lines of the southern district was held in Little Rock, January 14, 1929, closing with a banquet and program of addresses at the Hotel Marion. About fifty physicians from Arkansas and neighboring States were present.

Surgical operations and medical clinical demonstrations were given at the morning session at the Missouri Pacific Hospital, the following physicians taking part: W. F. Smith, H. Fay H. Jones, W. A. Kriesel, D. A. Rhinehart and M. J. Kilbury.

The scientific session was held at the Hotel Marion. The following papers were read and discussed: "The Surgical Management of Hemorrhoids," by Dr. Allen E. Cox, Helena; "Ureteral Calculus, Diagnosis and Treatment," a lantern slide demonstration, by Dr. H. Fay H. Jones, Little Rock; "The Use of Physio-therapy in Industrial Surgery," by Dr. L. J. Kosminsky, Texarkana; "Injuries to the Lower Forearms," lantern slide demonstration, by Dr. D. A. Rhinehart, Little Rock; "The Proper Preparation of a Patient for Transportation to a Hospital," by Dr. Charles S. Holt, Fort Smith; "Hernia," a lantern slide demonstration, by Dr. W. F. Smith, Little Rock; "Diabetes, Diagnosis and Treatment," lantern slide demonstration, Dr. M. J. Kilbury, Little Rock; "Abdominal Injuries," Dr. James Q. Graves, Monroe.

At the night session, A. C. Broadway, district claim agent, Little Rock, spoke at the banquet on "Substituting a Greenback for a Pill." Other speakers at the night session were: Harvey G. Combs, attorney, Little

Roek, on "When All Else Has Failed;" Charles F. Larson, superintendent of safety, St. Louis, "An Ounce of Prevention;" Dr. O. B. Zeinert, Chief Surgeon, St. Louis, "Looking Forward," and H. J. Mohler, President of the Board of Hospital Managers, St. Louis, on "When Dreams Come True."

SALINE COUNTY MEDICAL AUXILIARY MEETS

The Auxiliary to the Saline County Medical Society was delightfully entertained on Thursday afternoon, January 17, at the home of Mrs. Warren Kelly at Hot Springs. The President, Mrs. J. M. Phillips, presided over the business meeting, when it was voted that the auxiliary would sponsor an essay contest in the high schools of Saline County on the subject, "Community Hygiene and Sanitation." A review of recent numbers of the magazine, *HYGEIA*, was given by Mrs. T. E. Buffington. Mrs. J. M. Phillips and Miss Glennie Tomlinson were heard in a group of vocal numbers.

COUNTY HEALTH OFFICERS NAMED

Announcement of the appointment of 50 county health officers by the State Board of Health was made February 3 by Dr. C. W. Garrison, Secretary of the Board and State Health Officer.

County health officers are appointed by the State board on recommendation of the county judge. Judges in 25 counties have not submitted recommendations. Health officers will be named in these counties as soon as the judges' recommendations are received.

The list of health officers by Congressional districts, with the member of the State Board of Health from each district follows:

First District—Dr. O. L. Williamson, Marianna, member State Board of Health. Crittenden County, Dr. J. T. Irby, health officer, Marion; Cross, Dr. J. D. McKie, Wynne; Greene, Dr. F. M. Scott, Paragould; Lee, Dr. O. L. Williamson, Marianna; Phillips, Dr. W. B. Bruee, Helena; Poinsett, Dr. L. H. McDaniel, Tyronza; St. Francis, Dr. P. P. Boggan, Forrest City.

Second District—Dr. E. L. Watson, Newport, member State Board of Health. Cleburne County, Dr. S. A. Turner, Heber Springs; Fulton, Dr. O. S. Woods, Salem; Jackson, Dr. W. P. Moore, Newport; Lawrence, Dr. W. W. Hatcher, Imboden; Monroe, Dr. A. J. Dunklin, Clarendon; Randolph, Dr. J. W. Brown, Poteahontas; Prairie, Dr. L. M. Crow, Des Arc; Sharp, Dr. Wm. Johnston, Hardy; White, Dr. Orlie Parker, Searey.

Third District—Dr. A. S. Gregg, Fayetteville, member State Board of Health; Benton County, Dr. R. M. Atkinson, Bentonville; Carroll, Dr. J. H. Bohannon, Berryville; Searey, Dr. S. G. Daniel, Marshall; Washington, Dr. L. H. Callen, Fayetteville.

Fourth District—Dr. L. D. Dunnean, Waldron, member State Board of Health. Crawford County, Dr. John M. Stewart, Van Buren; Howard, Dr. B. S. Stokes, Center Point; Logan, Dr. K. M. Kelley, Texarkana; Polk, Dr. P. R. Watkins, Mena; Scott, Dr. L. D. Dunnean, Waldron; Sebastian (S. Dist.), Dr. C. W. Hall, Greenwood.

Fifth District—Dr. R. M. Eubanks, Little Rock, member State Board of Health. Conway County, Dr. W. H. Bruee, Morrilton; Franklin, Dr. J. L. Post, Altus; Johnson, Dr. W. R. Hunt, Sr., Clarksville; Pope, Dr. A. B. Tate, Russellville; Pulaski, Dr. C. McA. Wassell, Little Rock; Yell, Dr. T. J. Pool, Ola.

Sixth District—Dr. W. P. Parks, Hot Springs, member State Board of Health, Arkansas County, Dr. C. A. Henry, DeWitt; Cleveland, Dr. A. J. Hamilton, Rison; Dallas, Dr. W. P. Ward, Fordyce; Desha, Dr. J. C. Miller, McGehee; Garland, Dr. J. F. Merritt, Hot Springs; Hot Spring, Dr. E. H. McCray, Malvern; Jefferson, Dr. T. J. Cunningham, Pine Bluff; Lincoln, Dr. W. M. Weatherall, Star City; Lonoke, Dr. J. R. Cuning, Lonoke; Saline, Dr. J. A. Burks, Benton.

Seventh District—Dr. F. O. Mahony, El Dorado, member State Board of Health; Ashley County, Dr. M. F. Houston, Hamburg; Bradley, Dr. W. T. Fike, Warren; Chicot, Dr. W. D. Easterling, Lake Village; Clark, Dr. H. A. Ross, Arkadelphia; Columbia, Dr. J. J. Baker, Magnolia; Ouachita, Dr. R. C. Kennerley, Bearden; Union, Dr. L. G. Fincher, Wesson.

County Societies

UNION COUNTY

(Reported by GORDON HASTINGS, Sec.)

Following are the officers and members appointed on committees for the ensuing year by the Union County Medical Society: Dr. M. V. Russell, President; Dr. G. D. Murphy, Vice-President; Dr. Gordon Hastings, Secretary.

Program Committee: Dr. S. J. McGraw, Dr. D. E. White and Dr. Hastings.

Legislative Committee: Dr. H. H. Niehuss, Dr. F. O. Mahony and Dr. J. C. Falvey.

Credentials Committee: Dr. J. A. Moore, Dr. J. B. Wharton and Dr. T. J. Bush.

Meetings are held every two weeks and papers are read at each meeting by members of the society. Dr. J. A. Moore is to present a paper on "Influenza" at the next meeting.

Dr. G. W. Jones of Monticello has moved to Atkins, Ark.

Book Reviews

The Examination of Patients—By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University College of Medicine. Second Edition, Revised. Octavo of 392 pages, illustrated. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$4.50 net.

This book presents clearly the methods of determining the facts on which accurate diagnosis rests, which should be of interest to every practitioner of medicine. The contents include the following subjects:

The Theory of Diagnosis, The Assembling of Data; the Febrile Diseases, System Examinations, Neurological Examinations, Examination of the Ear and Throat, Examination of the Joints and the Extremities and Examination of the Breast.

The last chapter refers to Tests.

Treatment of Disease in Infants and Children—By Hans Kleinschmidt, M. D., Professor of Pediatrics, University of Hamburg. Authorized Translation of the Fifth German Edition with Additions by Harry M. Greenwald, M. D., Attending Pediatrician to the United Israel Zion Hospital. Published by P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. Price, \$5.00 net.

Therapeutics is one of the features of this book and only the drugs that the author has found of value in his broad experience. Dietetic and physical methods are well presented.

Aluminum Compounds in Food—By Ernest Ellsworth Smith, Ph.D., M. D., Fellow and Former President, New York Academy of Sciences, Fellow of the New York Academy of Medicine. Published by Paul B. Hoeber, Inc., New York, 1928. Price, \$7.00 net.

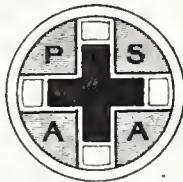
This book gives complete information in an interesting manner on the subject of aluminum in food. Invaluable to those interested in this subject.

The Normal Diet.—By W. D. Sansum, M. S., M. D., F. A. C. P., Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, California. Second Edition. Published by The C. V. Mosby Company, St. Louis, 1927. Price, \$1.50.

The author has dedicated this book "to an effort to prevent illness, relieve suffering, and prolong life through the proper use of food."

We quote from the introduction eight known fundamental principles which should be considered.

1. Normal diet should contain an adequate amount of the bulky, residue-containing foods to insure natural movements of the bowels.
2. The normal diet should contain an adequate amount of the alkaline-ash foods to balance the acid-ash foods.
3. The normal diet should contain an adequate amount of the starches and sugars to prevent the acetone type of acidosis.
4. The normal diet should contain an adequate number of food units, or calories, to maintain the individual under usual activities at a normal weight for the age, sex and height. Overweight, as well as underweight, should be avoided.
5. The normal diet should contain an adequate amount of protein.
6. The normal diet should include an adequate amount of the mineral-containing foods.
7. The normal diet should contain an adequate amount of the vitamins.
8. The normal diet should contain an adequate amount of fluids.



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Original Articles

LATERAL SINUS THROMBOSIS

Case Report

PAUL L. MAHONEY, M. D., F. A. C. S.
Little Rock.

Lateral sinus phlebitis and thrombosis is one of the dreaded complications of mastoiditis. While not common, statistics show that it has been present in about 4 per cent of cases. It occurs most frequently between the ages of 5 and 40. The right side is involved oftener than the left in the proportion of 3 to 2. The condition usually arises as a complication of suppuration in the mastoid process; but it may follow an otitis media by way of the small emissary veins or by direct invasion. The streptococcus hemolyticus is the organism most frequently encountered; but the pneumococcus and staphylococcus have been isolated in a small percentage of infections.

The chief and characteristic symptom is a septic temperature caused by the introduction of bacteria into the blood stream. Each rise in temperature may be preceded by a chill and followed by a profuse sweat. The chill may be so slight as to be overlooked, especially in children. In the interval between the patient is in the state of well being or euphoria. Headache and vomiting when present, usually occur late. Metastatic infection, most frequently to the lungs, may be a complication, causing pronounced symptoms.

Local signs may or may not be present. Among these may be mentioned ocular charges; Griesinger's sign, or an edematous swelling which appears over the mastoid process from occlusion of the mastoid emissary vein; McKernon's sign, in which the wound seems to be healing satisfactorily and is covered with granulations except at one point,

this the bony covering of the sigmoid groove. The bone is darker in color than at the time when first opened.

The white blood count usually varies from 14,000 to 18,000 per cubic millimeter. The streptococcus hemolyticus can usually be recovered from the blood, especially if cultures are taken at frequent intervals and following the chills. Blood cultures however, may be negative. There are many reasons for a negative blood culture. Fragments from the infected clot may not be detached and thrown into the circulation; There may be a non-infected clot below the infected one, or there may be a high bacterial liter of the blood and the organisms destroyed immediately upon entering the blood stream.

The diagnosis is based on the septic temperature, the positive blood culture, and the elimination of all other causes for the illness. Among these may be mentioned tuberculous meningitis, purulent meningitis, malaria, typhoid fever, erysipelas, and malignant endocarditis.

Without surgical intervention the prognosis is extremely grave. When metastatic infection occurs recovery is rare. In doubtful cases it is better to err in ligating an internal jugular vein than to take a chance in waiting for the development of diagnostic symptoms.

Case report: Betty H., age 5 years, was first seen May 12, 1928, in consultation with Dr. Harry Browning. The patient had had measles, mumps, whooping cough, and influenza. She had had frequent attacks of coryza and sore throat, preceding the removal of her tonsils and adenoids. Her general condition was good. She never had had a discharge from either ear until the present attack, which began about a week earlier, following a slight upper respiratory infection. There had been very little pain preceding a

spontaneous rupture of the drum membrane. There had been only a slight elevation of temperature until this date, when late in the afternoon, following a chill, the temperature rose to 106 F.

Examination revealed a very slight mucoid discharge from the right ear. There was no mastoid tenderness or altered position of the external auditory canal. The left ear was normal. The nose revealed only a slight turgescence of the turbinates. There was no posterior nasal discharge. The child was very bright and apparently suffering no discomfort. The general physical examination was negative. The urinalysis was negative. The total white cell count was 15,000 per cubic millimeter. The child was removed to the hospital for further observation.

X-ray examination of mastoids by D. A. Rhinehart revealed the following:

"These films show average-size processes for a child of this age, but with rather poor pneumatization. The left mastoid contains many very small cells; the right is completely opaque. This film shows either an infection of the right mastoid or an incomplete development of the mastoid cells. Infection is the more probable of the two conditions."

The right mastoid process was opened and revealed the following: The mastoid process is small, the cells being of the smaller type, a few contained pus, while most of the others and those in the region of the aditus were filled with coagulated material. The lateral sinus plate was white and smooth in appearance. The lateral sinus was not exposed.

In the hospital the temperature ranged from normal to 99 or 100 degrees F in the morning and from 103 to 104 degrees F in the afternoons. The total white blood cell count ranged from 8,000 to 12,000. The urine reports continued negative. Widal tests were negative. No malaria parasites were found in the blood and several blood cultures were negative. The spinal fluid was negative. Continued searches for other pathology revealed nothing of importance. The patient continued to have slight daily chills.

On May 12, 1928, the patient had a severe chill with elevation of temperature to 105.6 degrees F. A consultation was held and inspection of the lateral sinus was decided on. This was done and the findings were as follows: The wound was healing satisfactorily with the exception of one point, this being the

bony covering of the sigmoid groove. This plate was smooth and bluish in color. Its removal revealed a thickened and discolored vein that when opened bled freely from both ends. The wound was packed with iodoform gauze and covered with plain gauze. The internal jugular vein was then isolated and ligated.

For several days the temperature ranged from normal in the morning to 100 or 101 degrees F. in the afternoon. There were no more chills. Free hemorrhage followed removal of the packing, necessitating rapid reinsertion. This continued for the next two attempts. On June 8, 1928, the leucocyte count was 7,400; red cell count was 2,100,000; hemoglobin 35 per cent. The blood of the father was typed and found satisfactory for transfusion. A transfusion was given with practically no reaction. The child improved rapidly and was discharged cured June 12, 1928.

The points of interest in this case are:

Failure to isolate the streptococcus hemolyticus in blood cultures.

Early onset of the chills.

Low white blood counts.

Failure to demonstrate a clot in the jugular vein.

To our satisfaction a similar case was discharged cured last year in which we demonstrated a well organized clot.

TEN MONTHS' SOJOURN OF AN OPEN SAFETY PIN IN A CHILD'S LARYNX

ST. CLOUD COOPER, M. D., Fort Smith

Ten months' sojourn of an open safety pin in a child's larynx is so unusual that I thought a brief report of the case would be of interest. The fact that this foreign body remained in the larynx with the symptoms of its presence so clearly marked, and the history of the child choking and strangling followed by loss of voice, without an x-ray being taken, is hard to believe in this day and time.

A brief report of the case is as follows:

Harold S., aged 20 months, forceps delivery, breast fed; was in good health until in March, 1928. Mother says that she left the child in care of a friend and on her return was told that the child while playing suddenly gagged and strangled, followed by noisy breathing. The attendant was sure that the child inhaled a small safety pin, as one of the pins he had been playing with was missing. The mother

took the child to her physician who assured her that the child was all right and that it was impossible for the child to have inhaled the pin. Since then the child could not speak above a whisper and continued to have noisy breathing at times, more especially at night. She consulted other physicians, but no x-ray was taken.

During the present flu epidemic I was called to see the child on December 27, 1928, and found him with a rectal temperature of 104, with labored respiration, croupy cough, epigastric retraction, and other evidence of laryngeal obstruction. A smear and culture from throat was negative for diphtheria. To play safe the child was given 20,000 diphtheria antitoxin in the gluteal muscles that night and the next morning 20,000 more was given. The next night by aid of croup kettle the child rested fairly well, but still had noisy breathing. These symptoms contained for four days longer, he then was fever free and his breathing much better.

Three days later an x-ray was taken which showed a small open baby safety pin in the larynx with the point upwards and forwards. Five days later the pin was easily removed with small curved forceps through a tracheotomy opening. It was thought best to introduce tracheotomy tube for a few days. The tube was removed 48 hours later. Patient's recovery was satisfactory. It is doubtful whether the child will recover the full use of his voice owing to the long sojourn of the foreign body, which has produced an ulceration in the vocal cords.

THE DIFFERENTIAL DIAGNOSIS OF OVARIAN CYST

With Report of Three Illustrative Cases

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INTRODUCTION

It seems strange that the diagnosis of so common and obvious a condition as ovarian cyst should present any difficulty, yet such is often the case. Of course, the adept is almost never wrong, and the careless are rarely right; but who are the adepts? It only takes one instance of missed diagnosis to make us humble.

I am presenting three cases which are illustrative of the ease with which confusion

may arise. This comes about through failure or inability to exclude by differentiation, common conditions which cloud the issue. I am not discussing the very large, perfectly obvious cysts nor the small follicular variety, which are of little moment anyway.

GENERAL PRINCIPLES

Except for the treatment of ovarian cystoma, there is very little about which there is not room for argument. And even here, there are those who would deny Ephraim McDowell the honor of the first ovariectomy. Athenaeus in his "Donesophists," relates that Adamythes, King of the Lydians, used female eunuchs, and that his example was followed by his successors; but the details of the operation are mercifully lacking.

Legend has it that a German swine-herd spayed his daughter to curb her amateness. But it remained for McDowell in 1809, to add another brilliant page to the history of American surgery.

The origin of ovarian cysts is in dispute, and their classification not entirely clear. Papillary cysts are sometimes benign, and at times malignant in their behavior. There is not a single pathognomonic sign to clinch the diagnosis of ovarian cyst.

The history of the patient's disability is worthless because it is inconclusive. The subjective symptoms are vague and often misleading, unless the case is far advanced. Consequently, the diagnosis must be arrived at by physical examination. It is a question of using the eyes to see, the hands to touch, the ears to hear, and the tape line to measure. And in the final analysis, differentiation is the essential.

DIFFERENTIAL DIAGNOSIS

Given an appreciable abdominal tumor in a non-pregnant woman between 20 and 40 years of age, which has developed slowly, and which above all, is almost devoid of subjective symptoms, the diagnosis is almost certainly ovarian cyst. It only remains to differentiate simulating conditions. Case 1, is indicative of how a cyst of the ovary may be mistaken for uterine fibromyoma.

Case 1. Beatrice S—, a white woman, aged 32, wife of a soldier, was admitted to Tripler General Hospital, June 27, 1927, complaining of metrorrhagia of ten days duration, and other minor symptoms, which were thought to be due to uterine fibroid. Her general health had always been good, and aside from sterility

there had been no abnormality of the genitourinary organs till about four months previously. About this time she noticed a sensation of fullness in the lower abdomen and pelvis, accompanied with colicky pains at intervals. Her periods became lengthened in duration, and more profuse with many clots. The fullness and colicky pain were exaggerated by the menses.

Abdominal examination revealed a hard movable tumor, the size of a large cantaloupe, in the lower right hypogastrium. The tumor seemed to dip down behind the symphysis. Fluctuation was not obtained. Vaginal examination showed a small uterus crowded to the left by a hard, tense, irregular shaped tumor, the upper limits of which could not be palpated.

A right ovarian cyst diagnosed and removed at operation the following day. The cyst was pear-shaped, weighed 1.2 kilos, and had very few adhesions. It was of the multilocular pseudomucinous type.

The patient recovered promptly, and left the hospital on the twentieth day.

There were only two points to be decided here, in order to exclude fibroid of the uterus. Was the tumor solid; and was it connected with the uterus? Fortunately, the latter point was easy to determine by vaginal examination, although it is not invariably so.

The disturbing factors in this case were the irregular shape of the tumor and its seeming hardness. Early multilocular cysts are often tense, and especially so if crowded into a small pelvis; for the same reasons fluctuation is not always demonstrable.

The nobby shape was found to be due to a fibrous obliterating salpingo-oophoritis of the adnexa on the affected side. The tube and remains of the ovary were curled up on the posterior surface of the cyst in a distinct mass, with adhesions to the adjacent bowel and omentum.

The next case required the differentiation of a possible pregnancy. It is perhaps of greater interest because of its homely application.

Case 2. Dorethea A. H. B., a white woman, aged 30, wife of officer, U. S. Army, first reported to the Ante-Natal Clinic of Tripler General Hospital in August, 1926, with all the presumptive signs of pregnancy of about four months duration. Vaginal examination was very difficult and unsatisfactory because of small introitus combined with extreme re-

luctance of the patient to permit anything more than the most superficial examination. Patient was an elderly woman, previously sterile, and exceedingly anxious for a child. At the same time she was very apprehensive as to the delivery, and tried to elicit a promise of delivery by cesarean section. She stated that a surgeon who had done a Baldy-Webster suspension of the uterus for her several years before, had advised her not to have children.

She was admitted to Tripler General Hospital, September 21, 1926, with a diagnosis of threatened abortion manifested by the characteristic symptoms. Skiagraph failed to visualize fetal parts. She was referred to the Surgical Service for consultation.

Although patient insisted she was pregnant close questioning elicited the fact that scanty and irregular menses had appeared each month since the development of the abdominal enlargement. Vaginal examination was even more unsatisfactory at this time. Patient finally consented, very much against her desire, to vaginal examination under light anesthesia.

This examination revealed a pear-shaped tumor of the pelvis and lower abdomen, apparently continuous with the cervix. The tumor was thought to be a pregnancy of four months duration, but a guarded diagnosis was made to the patient.

Rest in bed and ice stopped the uterine bleeding promptly. She left the hospital, but returned October 20, with the same symptoms; i. e., uterine bleeding and cramping pelvic pain. As before, rest and ice relieved all symptoms.

Patient insisted that she was pregnant; her abdomen was steadily enlarging, and she began to prepare the layette for the expected child. She had no further trouble except progressive abdominal enlargement; but she was advised about March to come into the hospital for abdominal exploration, since labor had not occurred. As none of the positive signs of pregnancy had been obtained, it was felt that pregnancy was questionable, but the patient was very reluctant about any operative procedure, and reiterated that she knew she was pregnant because she had felt fetal movements. It might be said parenthetically, that fetal heart sounds were never heard, and that repeated skiagraphs failed to visualize fetal parts.

Physical examination was generally negative except for the presence of a movable ovoid tumor in the abdomen. The tumor ex-

tended nearly to the rib margins. Except for the last two months, a show of blood had occurred each month about the time for the regular menses.

At operation, March 18, 1927, a large right ovarian cyst weighing 1.8 kilos was removed by ovariectomy. The cyst was unilocular, but showed broken down partitions; it contained pseudomucinous material.

The patient had a very satisfactory convalescence and left the hospital on the eighteenth day.

This case caused me some chagrin, but I have the consoling knowledge that no harm resulted from my failure to recognize the true condition at first. It demonstrates most forcibly that subjective symptoms in ovarian cystoma are to be disregarded, especially when they are controverted by physical findings.

It is true that this woman had regular but scanty menses for the first seven months of observation. The exact extent of the flow was uncertain, because of her mental attitude. It must be remembered also that amenorrhea in the later stages of large cysts is common, especially if there is much anemia.

Cysts of the ovary frequently produce reflex disturbances in the breasts which resemble the changes of pregnancy. This woman had the breast signs of pregnancy.

The keynote in differentiating a pregnancy is determination of the size and position of the uterus. Unfortunately for the diagnostician, this woman had had a suspension of the uterus, several years before. Then, too, the tumor had risen into the abdomen, and in doing so, had still further drawn the uterus upward in acute antelexion.

Upon vaginal examination the cervix appeared to be continuous with a smooth jug-shaped tumor which occupied the midline of the pelvis and abdomen. Added to the reluctance of the patient to submit to examination was extreme sensitiveness of the vagina.

The two main points which negated pregnancy were persistent non-visualization of fetal parts by roentgen-ray and failure of the abdominal tumor to increase in size during the latter months commensurately with a full term pregnancy. Failure to appreciate the importance of these sign posts was the cause of the early confusion in this case.

The next case is one of ovarian cyst complicated by ascites and presents an unusually difficult task to differentiate.*

Case 3. Juanita E., a Hawaiian woman, aged 48, wife of a retired soldier, was admitted to Tripler General Hospital, March 15, 1928, with enormous abdominal enlargement, and complaining of increasing general weakness and dyspnea of three months duration.

The patient was a well-nourished individual, whose general health had always been good. The gynecological history revealed nothing abnormal except a menorrhagia for the preceding four months. She was the mother of one child, two years old, whose delivery had been normal. The family history was negative for tumors.

The patient had been conscious of fullness in the lower abdomen for six months, but did not notice actual distention till four months previously. She thought at first she was pregnant, but continuation of the menses seemed to preclude that. Positive respiratory distress had been present for two months, and had increased as the size of the abdomen augmented. She could not sleep nor rest in a recumbent position.

Physical examination showed a well-fleshed woman with the abdomen enlarged much beyond that expected in a full term pregnancy. The belly cavity seemed to be distended to the breaking point, either with fluid, or a smooth symmetrical tumor containing fluid under tension. Fluctuation was not obtained. The entire abdomen was dull, except high in the epigastrium and low in the opposite flank, when a lateral position was assumed.

The lungs gave evidence of a subacute wet bronchitis which was manifested by asthmatic breathing, an ineffectual cough, and temperature fluctuating around 101 F. Heart, blood pressure, and blood findings were normal. The urine contained but a trace of albumen.

Vaginal examination gave the impression of a large fluid abdominal tumor, with the intestines crowded into the pelvis. No definite decision as to the origin of the tumor or the organ involved could be made. Skiagraphs were negative for a pregnancy.

The patient was clearly a poor risk for complete operation under a general anesthetic, so in order to relieve the diaphragmatic pressure,

*I am indebted to Colonel Raymond F. Metcalfe, Medical Corps, U. S. Army, for permission to report this case, and for the privilege of assisting him at the operations upon the patient.

the tumor was aspirated through a 2.5 cm. midline incision, March 19, 1928. The cyst wall presented in the wound and 3,000 cc. of yellowish fluid was removed. No attempt at exploration was made. The pathologist reported that the fluid contained epithelial cells which were suggestive of malignancy; no opinion could be formed as to the origin of the cyst.

The withdrawal of fluid was productive of some improvement in the woman's general condition, but made but little difference in the size of the abdomen.

She was operated upon March 30, 1928, with spinal anesthesia, and two large ovarian cysts removed. The left ovary was the site of the larger cyst. Bilateral hydrosalpinx was present, the tubes being fused with the cysts, necessitating bilateral salpingo-oophorectomy.

The abdomen contained about 4,000 cc. of ascitic fluid; the parietal peritoneum was studded with many implantation cysts.

Omental adhesions masked the upper abdomen so that definite liver involvement could not be determined. The uterus was literally wrapped up in a mass of adhesions, and was very small.

The anesthesia obtained with 130-mgm. of novocaine injected into the third lumbar interspace, was ideal and lasted over one hour, well beyond the operation. The relaxation was particularly satisfactory and advantageous as it permitted easy separation of the many adhesions. There were no ill after effects from the anesthetic, as vomiting, headache, neuralgic pains, etc.

The patient made a slow, but satisfactory recovery and went home on the twenty-second day.

The condensed pathological diagnosis was ovarian cyst, bilateral, with intra-cystic papillary carcinoma, manifested by numerous implantations and invasions into the peritoneal surfaces.

Although she improved for a time, the abdomen again filled up with fluid and definite liver involvement was palpable. She died three months after leaving the hospital.

The difficulty in this case was that the extreme abdominal distention and respiratory distress, which the patient exhibited, was out of proportion to that expected from an ovarian tumor. Quite patently, she had ascites, as well as abdominal tumor, and the picture suggested malignancy. But the symptoms were

of comparatively short duration, and the general health had been but little affected.

The tumors filled the entire abdomen and their origin could not be determined. The umbilicus was not flattened as is expected in ascites. The liver, pancreas, and stomach were not palpable before operation. The kidneys seemed clear. Vaginal examination did not help much except to rule out uterine malignancy.

Ovarian cyst was tentatively diagnosed, but the type of cyst and its complications were only revealed at operation.

SUMMARY

1. Three cases of ovarian cyst are reported which illustrate the difficulty in differentiating this condition from uterine fibromyoma, pregnancy, and malignancy with ascites.

2. Emphasis is placed upon the physical examination; it is the determining factor in making a diagnosis.

THE CAPITAL INVESTMENT IN MEDICINE

A very important group, composed of economists, publicists, physicians and others, has undertaken to make an investigation of the cost of medical care, the results of which will be of great importance to medical men.

As a part of the work of the above-mentioned group, known as The Committee on the Cost of Medical Care, the American Medical Association is to request more than 25,000 physicians, selected at random, to furnish certain data pertaining to the invested capital involved in physicians' education, intern training, post-graduate courses, office and traveling equipment, office maintenance, medical society affiliations, library maintenance and medical licensure fees.

This, as you will realize, is a survey of the profession, by the profession, and for the benefit of the profession. The questionnaire is to be anonymous and, therefore, there need be no fear of any embarrassing or undesirable results from the information returned.

A serious and thoughtful consideration of this matter by the readers of this Journal is requested to the end that complete and reliable data may be given on the several items.

The importance of this survey cannot be over-estimated and universal participation by those who receive the questionnaire is necessary to the fullest fruition of the effort being made.—Neb. State Med. Jour., Feb., 1929.

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Editorials

HEALTH CONDITIONS THROUGHOUT THE WORLD

A report recently submitted to Congress by Surgeon General H. S. Cumming, of the Public Health Service, summarized, in an interesting manner, the health conditions in foreign countries during the past fiscal year. It is pointed out that on account of the relation of commerce to the public health, in connection with the spread of epidemic diseases, it is necessary to keep advised as to the prevalence of diseases not only in the United States, but, in so far as practicable, throughout the world.

There was during the year a constant interchange of sanitary information with other nations of the world through the International Office of Public Hygiene of Paris, the Pan American Sanitary Bureau, and the Health Section of the League of Nations. Valuable information was also received by the Public Health Service from American consuls, officers of the Service stationed abroad, and directly from foreign governments.

The necessity for co-operation among the nations of the world in preventing the spread of diseases dangerous to the public health has been more widely recognized during recent years than formerly. Experience has demonstrated that disease does not regard international boundaries, and the advance in the facilities for rapid transportation increases the danger of the introduction and spread of communicable diseases.

A noteworthy event which occurred during the past year was the ratification by the Senate in March, 1928, of the International Sanitary Convention signed in Paris in June, 1926. This revised the Convention of 1912. The Convention signed at Paris and ratified by the Senate was later promulgated by the President. The revised Convention makes important changes in the requirements for international notification of the presence of quarantinable diseases and imposes upon the Public Health Service as well as provides means by which this country may receive warning of threatened danger of epidemics from other countries.

The past fiscal year was characterized by generally favorable death rates throughout the world. This statement ought, however, to be qualified in two respects. One is that the 1927-28 death rate when more complete records are available will probably be found not

to have been lower than the exceptionally low rate for the preceding year. The other qualification is that any generalization as to the mortality rate for the world must be in relative terms, since the rate of mortality varies so widely in different countries. Thus for example, the death rate in India or China or even certain European cities, is several times as high as that in the United States or in most European countries, a fact that in itself constitutes impressive evidence of modern sanitation and public health administration.

Bubonic plague continued to be pandemic, but no new foci appeared, India still being the world center of bubonic plague. The widespread incidence of bubonic plague is evidenced by the fact that cases were reported in a number of foreign countries including French Indo-China, South China Coast, Algeria, Madagascar, Nigeria, Siam, the Argentine Republic, Ecuador, South Africa, Greece, and scattered localities in Russia. The outbreak of plague in the Argentine Republic has aroused apprehension as to its spread through commerce to other countries. The fact that six ships from ports of the Argentine have been found to be infected with plague upon arriving in ports in other countries, indicates that such fears are well founded. In spite of this widespread prevalence, no cases of bubonic plague occurred on the North American continent except two human cases in California where an epidemic focus exists in ground squirrels in that community.

The cholera situation in India, which is the principal focus of the disease of the world, was much more serious than in any of the previous eight years, with the exception of 1924. Cholera continues to be endemic in several other parts of the world principally in Siam, Cochin-China and China proper.

Yellow fever appeared in West Africa in June, 1928, after several months' absence. Prior to that time a number of cases were reported at various places in Africa. Occasionally cases had occurred from time to time in Brazil, but in 1928, an epidemic condition developed in Rio de Janeiro. Yellow fever was also reported in several other parts of Brazil. It has also been reported at several points in the interior of that country.

The typhus fever situation in Europe continues to improve although cases were reported in Poland, Lithuania and Russia.

Smallpox continues to be unduly prevalent in view of the fact that an efficacious method

of prevention is known. The disease is reported from practically every country in the world.

Editorial Clippings

NEGATIVE X-RAY FINDINGS

Negative findings are the bane of roentgenology. To locate a safety-pin in a child's throat is easy, but to prove that no safety-pin has been swallowed necessitates a correct x-ray examination of the entire gastrointestinal and respiratory tracts. A poor film may show a fracture of the hip, but to demonstrate the absence of fracture demands the best films, usually stereoscopic, and of both hips, for comparison. These negative findings require not only the best work, but extra work and material. The roentgenologist knows it, the surgeon knows it, but does the patient know it? His reaction to the bill of expense may answer this question.

The end-results of such cases are definite, yet in a more difficult class of cases the final result may be left indefinite and still less satisfactory to the patient. A cluster of dense gallstones may show on a single film, but in the event of a negative plate, a series of films is required after the administration of the iodophenolphthalein. And then, if no gallstones are demonstrated, the roentgenologist cannot always say there are no stones, because the gall-bladder shadow may be faint and indecisive notwithstanding the intravenous administration of the dye.

Again, a case of gastric hemorrhage with symptoms of ulcer is sent to the x-ray department. Sometimes a single series of screen observations and films show a persistent niche on the lesser curvature. The patient may be dismayed by the diagnosis but he will appreciate the skill of the roentgenologist and the wonder of the x-ray. Nevertheless, when no sign of ulcer or cancer is found, and extra series of films are made after extra barium meals, all with the utmost care and skill, then, with the fact of hemorrhage left unexplained, the patient wonders if the roentgenologist knows his business. And occasionally the surgeon, ready to do a delicate and costly operation, also may wonder. We hasten to add, with grateful recollections, that many surgeons stand by the roentgenologist and interpret the findings to the patient with candor and a sympathetic understanding. The fact remains that negative findings places the

roentgenologist on the defensive and require more or less explanation.

Blood in the urine is suggestive of stone. If, also, there is a history of pain in the back extending into the groin and genitalia, the clinical diagnosis of stone is convincing to most surgeons. The patient is then sent to the x-ray table, not so much for diagnosis as for the purpose of locating the stone. If, as often happens, no stone is discovered, then negative findings have left the surgeon with a "typical case" shorn of a diagnosis. Later the roentgenologist may hear that the case has been again roentgenographed in another office. This may occur even though the surgeon knows that hematuria is due to stone in only 18 per cent of cases, and that a blood clot, passing the ureter, may cause a renal colic. Furthermore, a stone may have passed or be one of those rare calculi without requisite opacity. With the young roentgenologist this verification should be welcomed. His reputation is in the making. He will learn that the high-sign of confidence is the acceptance of negative findings.

A qualified diagnosis is the negative phase of positive findings. If, for example, an image, apparently of a stone, is found on the film, then the experienced roentgenologist may refrain from an unqualified statement, but advise a cystoscopic examination so that an opaque catheter will show the position of the ureter and stereoscopic pyelograms outline the pelvis and calyces of the kidney before the stone can be definitely localized in the urinary tract and differentiated from calcified mesenteric gland and phleboliths. The triumph of a clear-cut, dogmatic diagnosis of a renal calculus has more than once been changed to humiliation by the failure at operation to find a stone. Especially in the report of a ureteral calculus, has a rash interpretation been the anti climax of good technical work. Although the qualified diagnosis occasionally may be the resort of the incompetent to cover inability in roentgen interpretation, yet at its best it is an admirable product of judgment and experience.

The most perplexing of negative findings are in those cases of reflex abdominal pain in which the cause lies outside of the abdomen as in abdominal angina and mucous colitis. Rarer cases may be due to angio-neurotic edema, the gastric crisis of tabes, or the milder crises of the erythemas. No less perplexing are the nausea, vomiting, and vertigo of the

Meniere syndrome, which bring no inconsiderable number of cases to the roentgenologist for the examination of the gastro-intestinal tract and gall-bladder. The skillful roentgenologist may do some of his finest work and from finished screen observations and beautiful plates finally report to the surgeon negative findings. The surgeon tells the patient that the x-ray showed nothing and the patient tells inquiring friends, contemptuously: "Oh, they found nothing." As for the reputation of the roentgenologist, "They went and told the sexton and the sexton tolled the bell."

Concerning less skillful roentgenologists, or merely hospital technicians, who may, in their zeal to find what is expected of them, misinterpret doubtful findings, we have nothing to say.

The clear statement of negative findings by the competent roentgenologist often requires courage, honesty, and a steady self-confidence. Such negative findings as to pathology could be reported more properly as positive findings regarding normal structure and function. Their value to the patient may be incalculable. Not only may operations be avoided but the internist is thus challenged to study the case anew with greater care and insight.

It is especially in the event of negative findings that the roentgenologist should exercise his rightful function as a consultant. Where a professor of roentgenology meets with his confreres in the morning discussion of cases, this may be recognized, but in the private practice of roentgenology the surgeons or physicians may assume that he should confine himself to the x-ray field. That is to say, while he should have a medical education yet he should be careful not to use it!

But this is not always true. The attending physician may frankly ask the roentgenologist to make a diagnosis, if possible. Under such circumstances, to plan the x-ray examination requires a scrutiny of the case-records. This is the most delightful type of x-ray practice and may demand the exercise of the widest medical knowledge and experience. But it is full of added responsibilities, because, if the course of the x-ray examination decided upon by the roentgenologist yields only negative results, then the justification of the time and expense rests with him. And it is then that the interpretation of negative findings acquires added importance, and the art of narrowing down diagnostic possibilities until the

pathologic entity is cornered, is found to be an engrossing game.

The line that divides roentgenology from general diagnosis is an imaginary boundary which vanishes as we approach it. In such work we must ever remember that our base is roentgenology and not be led by negative findings over too wide a field.

But the fact of negative findings is inescapable. They may need nothing more than the simple statement of results or they may need interpretation; but, in either event, surgeons and physicians should appreciate the extra skill and time which are so often required for such reports and should be careful to do the roentgenologist justice in their explanations to patients, bearing in mind that negative findings are the test of excellence.

A. W. Crane, M. D., Radiology, March, 1929.

Abstracts

MODERN DIAGNOSIS

In a brief summary of modern diagnosis, James B. Herrick, Chicago (Journal A. M. A., Feb. 16, 1929), says: The thought centers about the general practitioner. He is able to diagnose the majority of commoner ailments as well as a large proportion of typically frank, rarer, serious examples of well known disease. Often, however, in order to tell what is the matter in a complicated or obscure case he must appeal for help to the clinical or laboratory specialists, who may work singly or in groups. In doing this he should realize that the specialist may be narrow minded, the technician incompetent to interpret in terms of bedside disease. The group diagnosis may be lacking in information as to the essential detail, which may be lost in the blur of a characterless composite picture. The physician should not stubbornly refuse to accept the new nor should he be carried away by its supposed scientific accuracy. He should learn to employ the laboratory and instruments as important or, at times, indispensable aids to the older methods of history taking, physical examination and personal contact. In order rightly to judge of the need and value of special examination in a given case, he should have had undergraduate training in more than the so-called essentials of medicine. In one or two branches his studies should have been of an intensive, concentrated character that enables him to understand his own limitations and

those of others. This will make him a master in some one branch, with a self-respect that comes from the consciousness of power, will give zest to his work, will arouse in him the desire to continue such study into his life of practice and even to do investigative work of his own. It will make him a contented, forceful, progressive practitioner who can trust himself and therefore be trusted by others in that most important function of the physician, the telling of what is the matter with those who are ill.

RAYNAUD'S DISEASE OF UPPER EXTREMITIES

Alfred W. Adson and George E. Brown, Rochester, Minn. (Journal A. M. A., Feb. 9, 1929), review the successful treatment by resection of the sympathetic cervicothoracic and second thoracic ganglions and the intervening trunk in Raynaud's disease of the upper extremities. The patient was a woman, aged 25, who complained of color disturbances with associated pain in the hands and feet, which had first been noticed three years before when late in the fall blanching of the index finger of the right hand had occurred with subjective sensations of numbness. These symptoms disappeared completely during the following summer. In the second winter all the fingers of both hands, to the metacarpophalangeal joints, became affected. There was numbness and dull aching, but complete recovery took place when environmental temperatures became elevated. In the third winter the condition became more pronounced. Following exposure to cold, the fingers became markedly cyanotic, and when the temperature dropped still further vasomotor spasm was induced. The process now involved the feet. Dull aching pain occurred during the stage of cyanosis, and for the past three months the tip of the right index finger had become permanently cyanosed, with beginning loss of tissue. The general examination did not show evidence of cervical ribs or any organic factors to explain the condition. The neurologic examination did not show organic changes in the nervous system. The palpable vessels of the hands and feet pulsated and perhaps were slightly diminished in magnitude. The diagnosis was vasomotor neurosis of the spastic type involving the four extremities, or Raynaud's disease. It was believed best to attempt removal of the dorsal ganglions on one side only in

order to permit the opposite hand to serve as a control for the subsequent studies. The patient was operated on for the purpose of removing the cervicothoracic ganglion, the second thoracic ganglion and the intervening trunk. Since these two operations were performed, a bilateral dorsal ganglionectomy was also performed. Observations over a period of 106 days after removal of the cervicothoracic and the second thoracic ganglions and intervening sympathetic trunk on the right side, and sixty-eight days after a similar operation was performed on the left side, indicated marked, maintained vasodilatation in the upper extremities and face. Vasomotor activity following fluctuations in the environmental temperature, as evidenced by color and temperature changes in the hands, practically disappeared. The color of the skin became normal; it was dry and the surface temperature was markedly elevated. Sweating was markedly diminished over both arms, over the upper part of the chest both anteriorly and posteriorly, and over the face. The physiologic studies gave ample quantitative data to verify the improvement in the clinical condition. The authors point out that the results obtained in the upper extremities by this procedure are comparable to those obtained with the removal of the lumbar sympathetic ganglions in the lower extremities. Failures following ramisection and partial ganglionectomy are due to incomplete division of vasoconstrictor fibers supplying the peripheral circulation of the extremities. Therefore, ganglionectomy, which necessitates sympathetic trunk section, has given these permanently sustained temperature increases when simple ramisection and partial ganglionectomy have given only temporary or incomplete permanent temperature changes. The lumbar operation, subsequently performed on this patient and here reported, was followed by the usual highly satisfactory results in vasodilatation of the feet. A similar operation subsequently carried out on another patient with Raynaud's disease involving the upper extremities has been shown to have had similar vasodilating effects. The studies in these two cases give ample reason to believe that the surgical control of Raynaud's disease is an accomplished fact.

Personal and News Items

Now is the time to PAY your 1929 Dues.

Dr. W. R. Brooksher, Jr., Treasurer of the Sebastian County Medical Society, reports on March 1, renewals and reinstatements for 1929, amounting to 93 per cent as compared with last year, notwithstanding that several members were dropped for unethical conduct. This is a fine showing, and we congratulate all who contributed to this high basis of efficiency.

The following physicians were recent visitors to Little Rock: Drs. R. B. Robins, Camden; R. H. T. Mann, Texarkana; L. M. Lile, Geo. H. Martindale, Don Smith, Hope; A. S. Buchanan, Preseott; G. A. Warren, Black Rock; S. C. Grant, Mulberry; W. G. Hodges, Malvern.

In our list of county officers for 1929, published last month, we should have shown Dr. Dewey W. Sloan, Beebe, as President of White County Society, instead of Dr. Allbright.

The annual meeting of the Arkansas Medical Society will be held in Hot Springs, May 7-8-9. Judging from the activities of several committee chairmen, we feel safe to predict that the session will be one of the best ever held. Next month's Journal will contain the official program.

Dr. P. W. Lutterloh of Jonesboro was elected President of the Tri-States Medical Association, Tennessee, Mississippi and Arkansas, at its meeting held at Memphis, February 6, 7 and 8. Other officers elected included Dr. R. M. Donald, Morehead, Miss.; Dr. L. H. Medaniel, Tyrone, Ark.; and E. W. Hillsman, Trezevant, Tenn., Vice-Presidents, and Dr. A. F. Cooper, Memphis, Secretary-Treasurer.

The following additional health officers have been appointed by the State Board of Health: Craighead County, Dr. H. H. McAdams, Jonesboro; Mississippi County, Dr. F. D. Smith, Blytheville; Baxter County, Dr. Scott Appleby, Mountain Home; Marion County, Dr. L. M. Weast, Yellville; Sevier County, Dr. C. A. Areher, DeQueen; Lafayette County, Dr. F. E. Baker, Stamps; Nevada County, Dr. J. B. Hesterly, Preseott. Members of the Board of Health in the districts represented by these counties are: Dr. A. S.

Gregg, Third District; Dr. L. D. Duncan, Fourth District; Dr. F. O. Mahony, Seventh District.

To All Narcotic Registrants:

Any person registered under the Harrison Narcotic Law who removes his business from the place specified in his last application and stated in his special tax stamp to another address or discontinues a class of business indicated on unused official order forms for opium etc., in his possession or under his control, should notify the Collector of Internal Revenue of the district in which *registered within the calendar month* in which such transfer or discontinuance occurs. All such unused official order forms for opium, etc., should be forwarded to the Collector for cancellation as merchandise requested on an order form may be sent only to the person designated by the Collector and to the location specified on the order. An order carrying any alteration or change of any description may not be filled.

In order to avoid any confusion and delay in filling orders for narcotics, it is requested that the above instructions be strictly complied with.

AMERICAN COLLEGE OF PHYSICIANS to hold

THIRTEENTH ANNUAL CLINICAL SESSION

Boston, April 8-12, 1929

The American College of Physicians will hold its Thirteenth Annual Clinical Session in Boston, April 8-12. Dr. Charles F. Martin, Dean of the Faculty of Medicine, McGill University, is President of the College this year, and Dr. John H. Musser, Professor of Medicine at Tulane University Medical School is President-Elect and will be inducted to the Presidency toward the end of the Boston meeting.

The Program provides hospital visits, clinics, demonstrations and ward-walks during the forenoons at fifteen different Boston hospitals, and for general scientific sessions each afternoon and evening in the Assembly Room of the Hotel Statler.

A Symposium on Deficiencies will take place the first evening of the Session, and will be of particular interest because of the fact that deficiencies are nowadays assuming a far more wide-spread and important role than had heretofore been anticipated. They have come into

their own as factors producing acute and chronic disease on a par perhaps with infections.

Another special feature is a review of the Present Status of Vaccine and Serum Prophylaxis and Therapy, designed to give the Internist a rapid survey of the field.

Programs and details concerning admission, etc., may be secured from the Executive Secretary, E. R. Loveland, 133-135 S. 36th Street, Philadelphia, Pa.

LITTLE ROCK GENERAL HOSPITAL

Little Rock, Ark., March 12, 1929.

Mrs. Jerome Wright,
Russellville, Arkansas.

Dear Mrs. Wright:

At a meeting of the Staff of the Little Rock General Hospital held Friday night, March 8th, we were delegated to convey to you the heart felt sympathy of that organization on the great sorrow which has so recently come into your life through the passing of your husband, Dr. Jerome Wright.

We beg to assure you that all the members of the Staff feel, as do we, that the loss is a personal one—one that time will not readily efface.

Dr. Wright was well known, and greatly admired (may we not say loved) by us. His advice was good, his judgment sound, his counsel wise, and as, for us, "the shadows lengthen" it will be borne home with increasing weight that we have lost a faithful compatriot, a true and tried friend.

May we extend to you and through you to the family and close friends the sympathy we feel. Dr. Wright was a good man, a splendid neighbor, a warm and generous friend and it is hard to understand the mysterious workings of the all wise in this case. That he was a loyal husband and a devoted father you know and may we express the hope that the sweet and tender memories of your years of constant association will be your comforting and sustaining thought in this dark hour.

With kindest personal regards,

Very sincerely,

Staff General Hospital,

A. L. Jobe, M. D.
Bryce Cummins
Wm. A. Snodgrass
Edward O. Day

At the regular meeting of the Crawford County Medical Society, February 28, 1929, the following officers were elected: President, J. A. Wigley, Mulberry; Vice-President, M. S. Dibrell, Van Buren; Secretary-Treasurer, Jno. M. Stewart, Van Buren; Delegate to State Society, O. M. Bourland, Van Buren; Alternate Delegate, J. A. Wigley, Mulberry.

Marriages

PHILBIN-ROE—Married at Chicago, December 31, 1928. Lorraine Philbin and Joseph Roe, M. D., of Little Rock. Dr. Roe and wife have returned from their honeymoon and will reside at 822 Spruce Street, Little Rock.

Obituary

WRIGHT, JEROME E.—Dr. "Pat" Wright, Russellville, died March 5, 1929. Aged 45. Dr. Wright had been ill for more than six months, his illness starting from inflammation of the bone, caused by a slight bruise on his leg. He was taken to the Baptist Hospital in Memphis early last fall and remained in a critical condition for months. He was brought home in January, and while his condition improved at times he developed metastatic abscess of the lungs which resulted in his death.

Dr. Wright was widely known in college football and athletic circles. He was a graduate of the University of Arkansas School of Medicine, Class of 1915. He engaged in the practice of medicine in Russellville, and in 1917, enlisted in the A. E. F. and served overseas in the Medical Corps.

He is survived by his wife; one son, Harry, and a daughter, Patricia; a brother T. A. Wright, county superintendent of schools in Yell County, and his parents, Mr. and Mrs. John Wright of Yell County.

FLEMING, JOHN T.—Dr. J. T. Fleming, of Perryville, died February 27, 1929, aged 63, having practiced in Conway and Perry Counties for more than twenty-five years. He was a victim of pneumonia following influenza. Dr. Fleming is survived by his widow and two married daughters.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

Owing to the "flu" epidemic it was not deemed expedient to hold any meetings in January.

Meeting was held second Thursday in February at Rogers. On motion of Dr. Hurley, telegrams were sent our Representative and Senator in the General Assembly, voicing our disapproval of Senate Bill No. 124.

Guests from Springfield, Mo., contributed to our scientific program, which was especially interesting and helpful.

Dr. A. W. Gifford read a paper on "Modern Methods of Treating Mastoid Disease."

Dr. W. J. Busiek gave us an essay on "Otitis Media from the Viewpoint of the Pediatrician."

Dr. F. T. H'Daubler read a paper on "Chest Surgery." The essayist covered many phases briefly and clearly.

Members present: Atkinson, Clemmer, Curry, Duckworth, Eubanks, Greene, Harrison, Highfill, Guy Hodges, T. E. Hodges, Hughes, Hurley, Koobs, Love, McNeil, Moore, Ramsey, Scott, Smiley, Wilson.

In addition to essayists, visitors were: Dr. Estes of Rogers; Dr. Mock of Prairie Grove; Drs. Ellis and Paddock of Fayetteville; Dr. Rogers of Watts, Okla.; Dr. Sellers of Westville, Okla.

CRAIGHEAD COUNTY

(Reported by THAD COTHERN, Sec.)

The Craighead County Medical Society met March 7, 1929, in Ho-Bohemia of the Noble Hotel. A very palatable meal was served, Virginia ham being the chief feature of the menu.

Dr. H. H. McAdams told of attending some bull fights while on a visit to Mexico. His description was very graphic and interesting, especially as to the way the people in attendance were "refreshed" while waiting for the fight to begin and between acts. All rather envied the Doctor his experience.

A letter from the Secretary of the Arkansas Tuberculosis Association was read. This letter asked for the co-operation of our County

Medical Society in the April drive for an early diagnosis of this disease and an educational campaign to the public. A motion was made and carried that a meeting of the Society in the near future be devoted to the study of T. B.

On the scientific program for the evening was a paper by Dr. McCracken on the "Selection and Use of Anesthetics." His thesis was ably presented and the discussion was quite general. Everyone felt that he had gained something by hearing this paper and the discussions elicited.

Then followed a round table discussion of the recent meeting of the Tri-State Medical Association by those fortunate enough to attend. Among those discussing this meeting were Dr. P. W. Lutterloh, newly elected president of the association, and Drs. Altman, Horner, McDaniel and Ramsey.

Much good is accomplished by this Association and the recent meeting was the best one yet held.

A motion was made and carried that Mr. Herbert Parker be elected an honorary member of the Society. Mr. Parker gave expression to his appreciation of the matter in a few well chosen remarks.

Drs. Jones Lamb and W. M. Majors, of Paragould, were guests and each made a short talk which was very timely and much appreciated.

Present: Altman, Cothorn, Haltom, Horner, Howell, R. M. Jernigan, C. H. Lutterloh, P. W. Lutterloh, McAdams, McCracken, McDaniel, Moreland, Overstreet, Ramsey, Scott, Reagan, Willett, C. B. Fineh, T. C. Jernigan, Herbert Parker and Lile, Drs. Lamb and Majors of Paragould.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The regular meeting of the Lawrence County Medical Society met with Dr. H. R. McCarroll at Walnut Ridge, February 12, 1929.

Officers elected for the ensuing year were: President, W. W. Hatcher; Vice-President, H. R. McCarroll; Secretary, J. H. Stidham; Delegate to the State Society Meeting, J. C. Hughes.

The scientific program consisted of a symposium on "Lobar Pneumonia," presented by three essayists.

Diphtheria will be the subject for discussion at the next meeting.

MILLER COUNTY

(Reported by HERMAN CASTILE Sec.)

The Miller County Medical Society met in regular session, February 8.

The meeting was in the form of "Smoker Banquet," which was such a success that we have decided to repeat it at our next regular meeting.

Dr. J. T. Robison, president, was chairman. After much round table discussion it was decided to give all the support possible to get the pending basic science law and State charity hospital bills enacted.

Dr. Robison read a paper on the use of pituitary extract in obstetrics, which was discussed by Dr. White.

Dr. Preston Hunt read a paper on "Medical Economics," which brought out a general discussion. It was full of interesting data and well worthy of the most careful thought and study.

However, the paper did not ease the Secretary's mind as to just how to collect the money after the work has been done.

Present: Drs. Mann, J. K. Smith, Decker Smith, C. A. Smith, Lanier, Kittrell, Collom, Gardner, Hunt, Fuller, Roberts, Robison, Kirkpatrick, Beck, Tyson, Williams, Alfred Mann, Castile, Murry, Hibbits, White, Dale, Middleton, Watts.

NEVADA COUNTY

(Reported by A. B. DICKEY, Sec.)

The Nevada County Medical Society held its regular monthly meeting February 6. Present: Drs. S. J. Hesterly, A. S. Buchanan, J. B. Hesterly, O. G. Hirst and A. B. Dickey.

Two topics were put before the society for general discussion. The topics were "What Is the Purpose of a Medical Society?" and "What is Meant by Medical Ethics?" Several interesting case reports were presented by the members.

The following resolutions were adopted relative to the death of Dr. W. W. Rhee:

"Whereas, in the eternal fitness of things, the Supreme Ruler of the Universe, who holds the destiny of mankind in his Almighty hands, has seen fit to call from the sphere of earthly activities, our friend, brother and President of our Society, Dr. W. W. Rhee, and

"Whereas, at this time we pause, look back over the period of his accomplishments and recognize the great good that he wrought while amongst us, and

"Whereas, in his untimely death the County has lost a useful citizen, his wife an affectionate husband and his Society a faithful and loyal member and President, now

"Therefore, be it resolved, that the Nevada County Medical Society mourns the untimely death of its friend and member, and

"Be it further resolved, that the sympathy of the society be extended to the wife of our friend and brother, and that we share with her the sorrow and grief caused by the untimely death of her companion, and

"Be it further resolved, that a copy of this resolution be spread upon the minutes of this Society, and also let a copy be forwarded to his wife.

Officers elected for 1929 were: O. G. Hirst, President; J. B. Hesterly, Vice-President; A. B. Dickey, Secretary-Treasurer; A. S. Buchanan, Delegate to the State meeting and J. B. Hesterly, Alternate.

The next meeting will be March 1st.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular session at the Sanitary Tea Room in Camden, February 7. The meeting was preceded by a banquet.

Present: Rinchart, Early, Jameson, Powell, Word, Robins, James, Newsom, Whaley, Rushing, Purifoy and Randolph Smith of Little Rock.

The scientific program was as follows:

"Middle Ear Disease," by Dr. C. S. Early, Camden. "Spinal Anesthesia," by Dr. Randolph Smith, Little Rock.

The next meeting will be held at Camden, March 7. The subject for discussion will be "Diabetes."

PHILLIPS COUNTY

(Reported by M. FINK, Sec.)

The Phillips County Medical Society held its annual meeting, March 9, 1929, celebrating its 58th Anniversary. It is the oldest medical society in the State, having been organized in 1871.

The meeting was well attended and the society was found to be in good condition, both financially and professionally. It now has a membership of twenty-one.

The following officers were elected: President, G. W. Eubanks, Wabash; Vice-Presi-

dent, Geo. R. Storm, West Helena; Secretary-Treasurer, M. Fink, Helena; Censor, W. C. Russwurm, Helena; Delegate to State Society, H. H. Rightor, Helena; Alternate Delegate, A. E. Cox, Helena.

The Society will meet again the first Tuesday in April.

Book Reviews

The Heart in Modern Practice.—Diagnosis and Treatment. By William Duncan Reid, A. B., M. D., Assistant Professor of Cardiology, Boston University, School of Medicine. 81 Illustrations. Second Edition Revised and Enlarged. Published by J. B. Lippincott Company. Price, \$6.00.

In this new edition the author has added new chapters, giving the average reader a more complete and useful grasp of the heart rhythms. Many new illustrations are shown; mostly electrocardiograms with some polygrams. In the other chapters much new material has been added, such as the etiology of arterial hypertension and its treatment by diet and liver extract, etc. The author in presenting this book has in mind brevity with clearness and it should prove to be a very useful volume.

The Elements of the Science of Nutrition.—By Graham Lusk, Ph. D., Sc. D., Professor of Physiology at the Cornell University, Medical College, New York City. Fourth Edition, Reset. Octavo of 844 pages. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$7.00 net.

The author's aim in this book is to review the scientific substratum upon which rest present-day knowledge of nutrition both in health and disease. The last chapter refers to "Food Economics."

Regional Anesthesia.—By Gaston Labat, M. D. Clinical Professor of Surgery, University and Bellevue Hospital Medical College, New York City, Laureate of the Faculty of Sciences, University of Montpelier; Laureate of the Faculty of Medicine, University of Paris; Formerly Special Lecturer on Regional Anesthesia; The Mayo Foundation, University of Minnesota. With a Foreword by William J. Mayo, M. D. Second Edition, Revised. Octavo of 567 pages with 367 original illustrations. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$7.50.

This book refers to a comparatively new subject which as Dr. Mayo says, "has come to stay." The reading of this affords an opportunity of acquiring a practical knowledge of this subject.

Neurological Examination.—An Exposition of Tests with Interpretation of Signs and Symptoms. By Charles A. McKendree, M. D., Associate, Department of Neurology, College of Physicians and Surgeons, Columbia University. With a foreword by Henry Alsop Riley, M. D. 12mo of 280 pages with 88 illustrations. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$3.25 net.

The purpose of this book is to familiarize physicians with a comprehensive and systematic form of examination of the central nervous system.

The New York Academy of Medicine. Lectures on Medicine and Surgery.—First series, 1927. With Thirty-nine illustrations. Published by Paul B. Hoeber, Inc., New York. Price, \$5.00 net.

The outstanding lecture in this group is by Dr. George M. Mackee, New York, on "The Cutaneous Manifestations of Syphilis." He refers to the "Stages of the Disease," "Sequence of Events," "Importance of Early Diagnosis," "The Chancre," "General Characteristics of Syphilitic Eruptions," "The Macular Syphilide," "The Papular Syphilide," "Vesicular and Bullous Syphilides," "Alopecia," "The Discoid Syphiloderm," "The Annular and Relapsing Syphilides," "The Squamous Syphilide," "Rupial Syphilide," "The Nodular Syphilide," "The Gumma," "Congenital Syphilis," "Leucoplakia," "Stigmata of Congenital Syphilis," the article is illustrated.

The Surgical Clinics of North America (Issued serially, one number every other month.)—Volume 8, number 3. (Chicago Number—June, 1928), 219 pages with 49 illustrations. Per Clinic year (February, 1928 to December, 1928.) Published by W. B. Saunders Company, Philadelphia. Paper, \$12.00; Cloth, \$16.00.

Dr. Arthur Bevan in this volume presents a clinic on "Gastro-Enterostomy Disease," describing a case with the treatment and operation in detail.

International Clinics.—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume 1, Thirty-Eighth Series, 1928. Published by J. B. Lippincott Company, 1928.

Among the many interesting and instructive clinics in this volume we wish to call attention to "Visceroptosis" by Dr. John Phillips, Cleveland. Following his discourse on this subject, he gives the diet that is usually well tolerated by most patients and includes with illustrations, the exercises that are of importance in the treatment of visceroptosis.

Muscle Function.—By Wilhelmine G. Wright, Boston, with a foreword by J. Playfair McMurrich, Professor of Anatomy, University of Toronto. Published by Paul B. Hoeber, Inc., New York, 1928. Price, \$3.50 net.

The object of this book is to record the excellent results of muscle function by Dr. Lovett and Miss Wright. As a result of their studies Miss Wright has presented a norm, a paradigm for muscle action, which cannot but prove useful to those who have to do with muscle training.

The Surgical Clinics of North America (Issued serially, one number every other month.)—Volume 8, Number 1. (Lahey Clinic Number—February, 1928.) 210 pages with 74 illustrations. Per clinic year (February, 1928 to December, 1928). Published by W. B. Saunders Company, Philadelphia. Paper, \$12.00; Cloth, \$16.00 net.

Among the interesting articles in this issue we wish to quote from Dr. Huxthall's discussion on "The Use of Quinidin Sulphate in Auricular Fibrillation." He has found that "quinidin sulphate is a valuable drug in the restoration of normal heart rhythm. Established auricular fibrillation has been stopped in the majority of cases when thyroidectomy had failed to do so, from three days to two years after operation. Quinidin therapy in our hands has been effective in all cases of postoperative paroxysmal fibrillation, whether in thyroid patients or not. Half of this group were given quinidin at onset. The remainder, if fibrillation had not ceased in the interim, were given the drug three days after onset."

Diseases of the Skin.—By Henry H. Hazen, A. M., M. D., Professor of Dermatology in the Medical Department of Georgetown University. Third Edition. 148 illustrations, including two color plates. Published by The C. V. Mosby Company, St. Louis, Mo., 1927. Price, \$10.00.

In this book Dr. Hazen describes the skin diseases which are now attracting attention, and which are probably much more common than has been realized. It is of convenient size and well illustrated.

Emergencies of a General Practice.—By the late Nathan Clark Morse, A. B., M. D., F. A. C. S., Revised and Rewritten by Amos Watson Colcord, M. D., Surgeon, Carnegie Steel Co.; Surgeon, Pennsylvania Railroad System. Second Edition. Published by The C. V. Mosby Company, St. Louis, Mo., 1927. Price, \$10.00.

This book describes every day accidents that frequently confronts the general practitioner at a time when least expected, such as fractures and dislocations; first aid; treatment of asphyxiation, medical, surgical and obstetric emergencies.

Clinical Case-Taking.—Supplement to Methods in Medicine. By George R. Herrmann, M. D., Ph. D., Assistant Professor of Medicine, Tulane University, New Orleans, La. Published by The C. V. Mosby Company, St. Louis, 1927. Price, \$1.50.

This booklet serves as a guide for the study of the patient and for the comprehension of clinical medicine.

Minor Surgery.—By Arthur E. Hertzler, M. D., F. A. C. S., Chief Surgeon, Halstead Hospital and Victor E. Chesky, A. B., M. D., F. A. C. S., Chief Resident Surgeon, Halstead Hospital. With 438 illustrations. Published by The C. V. Mosby Co., St. Louis, Mo., 1927. Price, \$10.00.

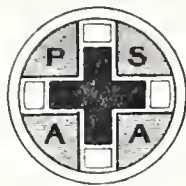
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Original Articles

THE HEART DISEASE PROBLEM

OLIVER C. MELSON, M. D., F. A. C. P.

Little Rock

Heart disease at the present time is the greatest individual health hazard in this country. This applies to both morbidity and mortality. As a cause of death, heart disease has superseded tuberculosis and pneumonia, and for the past two years, has ranked first in the United States. Statistics published by the American Heart Association state that 2 per cent of the entire population have heart disease. This means that 2,000,000 of our national citizenry or 35,000 to 40,000 of the people of Arkansas have heart disease.

With such an incidence, the death rate from disease of the heart is extremely high. Its annual toll is close to 200,000. In 1925, a fraction over 15 per cent of all deaths in the United States were due to cardiac disease. During the same year, 1,457 citizens of Arkansas died of heart disease, while in 1926, it was the ascribed cause of 1,551 deaths. The mortality among the colored race was about half of the white total.

In a statistical study for the Metropolitan Life Insurance Company, Dublin estimates that from 5 to 9 years of age, heart disease causes as many deaths as whooping cough and measles, and is only excelled by diphtheria. Furthermore, he concludes that from 10 to 14, the deaths from heart disease are more frequent than from the four principal diseases of childhood combined.

The physician himself does not escape the ravages of this specter. For the past four years heart disease has been the most common cause of death among physicians. Last year 884 physicians were reported as succumbing to it. In a series reported by Hyman, over one-half of the deaths of doctors were due to cardio-vascular disease.

The average life expectancy has been increased to 55 years. This has not been done by continuing the lives of those over 40, but rather by preventing the diseases which increased the infant and childhood mortality. Therefore to reduce the incidence of heart disease, we must look for means of prevention.

Effective prevention depends largely upon a thorough understanding of the etiology of a disease, and in cardiac disease the etiology, unfortunately, may depend, not upon one, but on several factors. Authorities seem agreed that there are three main causes, namely, infections of an acute nature, syphilis, and arterio-sclerosis. In the first group, rheumatic fever and its allied diseases, chorea and tonsillitis are by far the most important. These account for at least 50 per cent of all the cases of heart disease, especially those below the so-called heart disease age of 40 to 45. Focal infections arising in the tonsils, teeth, sinuses and middle ears, and such acute infectious diseases as pneumonia, influenza, diphtheria, scarlet fever and measles are guilty to a less degree of causing severe organic heart lesions. In the older individuals, syphilis is the causative agent in about 15 per cent of all cardiac cases, while arterio-sclerosis and other degenerative diseases are the producers of the remainder.

With these facts at hand, then, our problem becomes more complex; preventive measures must be applied to these diseases, or at least, treatment must be such that cardiac involvement will not ensue. Our most recent researchers lead us to believe that the streptococcus is the inciting agent of acute rheumatic fever, and certainly *S. Viridans* is frequently found in valvular granulations, yet our knowledge is not altogether complete in its proofs of the relationship of the streptococcus to rheumatic fever. Likewise, in the so-called focal diseases, the streptococcus has been by far the predominant organism, and through the comparatively recent work of

Dick and Dochez, little doubt can be entertained that it is also the exciting agent in scarlet fever. Of the other acute infections which predispose to cardiac disease measles is the only one without definite etiology. The spirocheta pallida is the cause of syphilis. As for arteriosclerosis, the multiplicity of causes given for its existence pave the way for a suspicion that perhaps none of them are correct. However, we know some of the things which make us old before our time, and by practicing their prevention we may see some reduction in the incidence of arteriosclerotic heart disease, and the disability, dependence and distress that so often accompany it.

Preventive measures must be applied all along the span of life. Beginning in childhood when the rheumatic infections are most prevalent, much can be done to reduce cardiac complications. Generally speaking, these infections tend to recur, and with each recurrence the possibility of heart disease ensuing is increased. The indication, then, is obviously to prevent the recurrences. In children, such conditions are usually preceded by the signs and symptoms of the common cold, and it seems that the nose and throat are the primary avenues of the entrance of infection. That sore throats or frank tonsillitis precede chorea and rheumatic fever is a clinical observation which requires no emphasis. On the other hand, it brings to mind the controversial point of tonsillectomy. While the clinical results are not always as we would wish them to be, it is my practice to advise tonsillectomy in any child who has been a subject of repeated upper respiratory infections, or tonsillitis, with or without an associated rheumatism or chorea. It is of interest in this connection to draw your attention to two recent articles in the Journal of the American Medical Association. The first by Rhoades and Dick (1) offers an explanation for failures in tonsillectomies. They found pieces of tonsillar tissue of "appreciable size" in the throats of 73 per cent of persons who had undergone tonsillectomy without subsequent relief of symptoms. The second is by Polvogt and Crowe (2) who studied the bacterial content of tonsils and adenoids obtained from 100 operations. In 18 cases with associated heart disease, hemolytic streptococci were found in 16 and staphylococci in 2. 91 per cent of the entire group showed hemolytic streptococci, 8 per cent staphylococci aureus, and 1 per cent no growth. Recurring attacks of chorea may

also be prevented by obtaining for the child healthful surroundings and more prompt care in the simple indispositions that arise. This can be accomplished through the education of the parents.

In the presence of an active rheumatic infection, I believe that the most potent danger from the standpoint of cardiac involvement is too early activity. Even though fever and pain have subsided, I recommend that a child be kept in bed for at least two weeks.

Passing on to the young adults we come to the starting point in the prevention of the degenerative heart affections which manifest themselves so grossly in the fourth and fifth decades of life. These are the habit forming years, and instruction in the proper hygienic care of the teeth, gums, the skin and the like will assist materially in preventing invalidism through heart disease. Good habits of eating, both in quantity and quality, moderation in the use of tobacco, coffee, alcoholic liquors, and regulated elimination can also be acquired in the early adult periods. By the spread of propaganda, the dangers of venereal disease, especially syphilis, can be demonstrated and the youth appealed to through reason. About seventeen years elapse between the primary lesions of syphilis and the development of circulatory disturbances. This seems adequate time for efficient treatment, but unfortunately it is so frequently neglected that irreparable damage is done. The prevention of syphilitic heart disease lies in the early diagnosis and immediate and adequate treatment.

In spite of our limitations in regard to the etiology of arteriosclerosis, there are some things which we know are conducive to a premature senility. Heredity undoubtedly is a big factor. Some individuals have arteries which withstand many times the stress and strain which tear down the arteries of others. Moderation in physical and mental activity, proper rest following the day's work, instead of burning the candle at both ends, will aid in withstanding the assaults of age. In this connection, I believe that the periodic health examination will prove of inestimable value in the detection of early signs of impending heart damage. The advice which can be given at the completion of such a personal inventory, I am convinced will in no small way contribute to the decreasing incidence of arteriosclerotic heart disease.

Were these preventive measures applied all through the life of our population, a remarkable reduction in the incidence of heart disease would unquestionably ensue. It would not however, be completely eliminated as yellow fever has been, and we must still cope with the problem. What can we do for the individual who already has contracted a cardiac lesion? Cure is too often beyond the pale of human endeavor, yet it is possible to bring about a state of quiescence which may endure over a period of years. In the treatment of heart disease, the point to be carried uppermost in mind is that the character and health of the cardiac musculature is of greater value in prognosticating the outcome than is the integrity of the valves. In other words, the circulation will be maintained only so long as the reserve force of the myocardium is not overtaxed. Heart failure is produced when the reserve force has been taxed beyond the limit by the exertion of the individual. Our efforts must be directed beyond the limit by the exertion of the individual. Our efforts must be directed to the prevention of heart failure.

In children, treatment consists first, in confinement to bed for the period of active infectious symptoms. This is for the purpose of preventing an extensive invasion of the myocardium by the infecting organism. Tonsillectomy should be performed. After this period, exercise and normal play are encouraged for the purpose of training the myocardium and increasing its health and tonicity. Certain restrictions are of course necessary, and competitive sports and tests of endurance are forbidden. The amount of exercise taken must be governed by the effect upon the individual heart. There should be a routine of rest established as well as of activity, so that additional infection may be eliminated. The child should be educated to eat properly. Lastly, try to banish forever the common cold.

The situation is quite different in the adult. The symptoms which bring him to you are those of heart failure. This means that he has been exercising beyond the capacity of his cardiac reserve. Therefore, we must investigate the circumstances which led to his symptoms, the time of their onset, and their progress. We must evaluate his symptoms. I believe that the proper evaluation of subjective symptoms will often be of greater value in prescribing treatment than the interpretation of physical signs.

Rest is the first indication in the treatment of cardiac failure. This is an all inclusive term, and means not only rest from physical activity, but mental and nervous rest as well. Worry, insomnia, bad dreams may do much to hinder a patient's recovery. Sometimes it is necessary to allow the patient to assume his own position in bed so that he may get the maximum rest. The diet should be varied, with fluids limited, and solid foods easily masticated. The food should be served as daintily as possible and never forced upon the patient.

When it is considered that the patient is able to indulge in exercise, he should be encouraged to do so in the open air. The amount taken at any one time should be governed by the sensations of the patient. It is essential to impress upon him that as long as he experiences pleasure in exercising, then it is doing him good. Conversely, if he has the sensation of discomfort and distress, then the exercise is detrimental.

No discussion of heart disease would be considered complete without mentioning at least the value of drugs in its treatment. Their chief value is in their ability to slow the heart rate. The digitalis group is the most common in use. Its great value is demonstrable in those cases of heart failure associated with dropsy, where it acts with almost miraculous effect. Methods of administration of these drugs are legion, and as long as the therapeutic result is obtained, the method is of little moment. Digitalis is distinctly contraindicated in cases of heart disease following diphtheria, because of the possibility of damage having been done to the conducting mechanism by the diphtheria toxins. In chorea sodium cacodylate has been found particularly efficacious. Nitrites in the anginal attacks of hypertensive heart disease and the iodides may also be employed with success in selected cases. Syphilitic heart disease is best treated by mercury and the iodides of sodium and potassium. The judicious use of sedatives is not to be ignored to provide comfort for the sufferer. Morphine and luminal especially should be kept in mind for their sedative actions. The latter is particularly valuable in hypertension cases.

There are two points in regard to drugs that should be emphasized. They will not replace such measures as rest, diet, graded exercise and proper hygiene. Secondly, the finding of a cardiac murmur should not be the signal

to put a patient upon some cardiac stimulant.

In conclusion let me state that the solution of the heart disease problem lies not in its treatment, but in its prevention. Regardless of how highly efficient is our treatment, the possessor of a damaged heart is distinctly handicapped and a potential public charge. The medical profession has another opportunity to educate the nation to evade the Grim Reaper.

(1) Journal of the American Medical Association—Vol. 92, No. 12 (March 23, 1929)—Page 962.

(2) Journal of the American Medical Association—Vol. 91, No. 16 (October 20, 1928)—Page 1149.

TUBERCULOSIS*

S. J. McGRAW, M. D., El Dorado

The subject we have for tonight is as old as the hills; perhaps as old as man himself. Hippocrates gives us as good a description of it as we have today. King Tut, who lived about the time of Moses, we are told, died of tuberculosis.

In recent years, however, we have made several valuable discoveries. First, the specific organism that produces the disease; second, that it is the most universal disease in the world; and, third, that it is not necessarily always fatal. With these discoveries the profession and the people have taken courage, and a new interest has developed concerning this old subject.

Tuberculosis is a specific infectious disease caused by the tubercle bacillus. It may be acute or chronic, usually chronic; primary or secondary, usually secondary. It is eminently a disease of childhood and young adult life, later manifestations are probably the result of old latent infections.

The tubercle bacillus is found wherever man is found, no flesh is exempt from its ravages. There are three fairly distinct types of the bacillus; (1) the human, which infects man; (2) the bovine, which infects cattle; (3) the avian, which infects fowls; and some authors give a fourth, the reptilian, which infects cold blooded animals such as reptiles.

For a long time it was thought that the bovine or avian bacillus did not infect man; but it has been clearly demonstrated that it does. We may contract tuberculosis of the bovine type from infected milk, butter or

meat, or the avian type from fowls, and it has further been observed that after a certain length of time these bovine and avian bacilli in man take on the appearance of the human type; and also calves infected with the human type later take on the appearance of the bovine type. So the tubercle bacillus seems to be the tubercle bacillus wherever we find it and its change of appearance may be only a readjustment to new surroundings.

The tubercle bacillus is possessed of wonderful endurance, which statement scarcely need be made, since it has survived all the ages. There are two elements that will certainly kill it, sunshine and fire.

Tuberculosis may be contracted in one of three ways: inhalation, ingestion, and inoculation.

Inhalation: from breathing dust from an infected ward, stirred up by dry sweeping or otherwise; also from moist droplets from an infected person coughing, sneezing, or laughing.

Ingestion: from swallowing infected meat, milk, butter, fruits, water or any infected material.

Inoculation: a wound coming in contact with infected material.

By one or all of these avenues the bacillus gains entrance into the body, and has probably gained it in the first years of life.

Heredity: Is tuberculosis inherited? We think not. However, the offspring of tubercular parents is not apt to be as strong as from healthy stock; then the child is subject to an almost constant exposure from the infected parent and can hardly escape infection. However, a child of tubercular parents who survives fairly well until the age of thirty stands a good chance not to die of tuberculosis.

The disease is more common in the female than the male. Two very good reasons may be on account of the long drawn out burden of pregnancy and being in the house more, for tuberculosis is largely a house disease. It is more prevalent in warm climates where the country is low, with damp atmosphere and sudden variations of temperature. It is least prevalent in the mountains fairly high and dry, with uniform or slowly changing atmosphere.

Immunity: Is tuberculosis an immunizing disease? We have many reasons for believing that it is. In a large hospital in Vienna a record was kept of the girls entering training, and it was discovered that those entering

*Read before the Tri-County Medical Society, held at Camden October 18, 1928.

with Von Pirquet negative were more susceptible and their death rate higher than those who entered with Von Pirquet positive. It appeared in this investigation that the girls with positive Von Pirquet had developed partial or complete immunity, while the negative girls seemed to have little immunity.

Again it is an accepted theory that nearly all tuberculosis is contracted during childhood or young adult life, and if they can attain the age of thirty in fairly good condition they have developed sufficient immunity to protect them. This statement does not hold good in all cases, for one may die of tuberculosis at any age; but cases occurring past middle life most probably are old infections lighted up by some primary trouble, such as influenza, broncho-pneumonia, etc. Dr. Osler very aptly illustrates this subject of immunity with the parable of the sower. "Some seeds fell by the wayside and the birds gathered them up." They didn't even get a start, the protective elements of the body gathered them up and destroyed them. "Some fell among thorns and were smothered." These people were almost immune and a very slight involvement completed their immunity. "Some fell in stony ground. They sprang up, but having no depth of earth soon withered and died." These people had several attacks which were passed off as colds, bronchitis, influenza, etc., but in due time they were immune. "Some fell on good ground. They sprang up and bore fruit, some thirty, some sixty, some a hundred fold." These are of that unfortunate class who do not possess this natural immunity and are unable to acquire it; so the disease germs multiply and spread, and with each attack the patient's resistance is lowered. The fight may be long or short, but constantly a losing fight, until the end.

Predisposing Causes: Any condition which lowers vitality and reduces the natural resistance of the body is a predisposing cause.

Since most tuberculosis is contracted during childhood the so-called diseases of childhood are very much to be considered, colds, bronchitis, tonsillitis, whooping cough, measles, influenza, diphtheria, scarlatina; these conditions lower the child's resistance and render his lungs a favorable soil for the reception and growth of the tubercle bacillus. When these diseases of childhood are eliminated the incidence of tuberculosis in childhood will be greatly reduced. Other predisposing causes are insufficient food, insufficient

clothing, exposure to acute cases, living in infected houses, crowded apartments, and general unsanitary conditions.

Prophylaxis: This embraces any measure calculated to prevent the contracting of tuberculosis. An abundance of good food, pure water, sufficient clothing, well ventilated rooms and schools, good beds, frequent examinations of children for defects and their correction, lots of recreation and play in the sunshine, good environment and sanitary instruction in the public schools. Children take to this instruction remarkably well, and after all tuberculosis or not tuberculosis is largely a question of hygiene and education. The way to prevent pulmonary consumption in the adult is to remove the bad tonsils and adenoids in the child, weigh him regularly and, if he does not come up to his physical requirements, know why. Much may be done at this age. As the bush leans, so will the tree grow; as is the child, so will be the man. The age of preventive medicine or measures is not coming, but is now here. Prophylaxis is the watch word in tuberculosis.

Pathology: The pathology of tuberculosis is legion, it runs just about the entire gamut of pathology. Hare says, "He who knows the pathology of syphilis and tuberculosis knows all of pathology." And when we come to think that there is no part or parcel of the human body exempt from the ravages of tuberculosis, we need not wonder at such a wide range of pathology. In children tuberculosis usually makes its appearance as an adenitis, which may be local or general; the cervical glands are very often involved, and while all enlarged glands are not tubercular, many of them are. During childhood or young adult life the infection may become arrested or cured, or it may find its way to the lungs, the organs of election. An otitis, or osteomyelitis, an arthritis, a Pott's disease is common in childhood, perhaps more so than in adult life. The lymphatic and local type of tuberculosis seems to prevail in childhood, while the pulmonary type prevails in young adult and adult life. An explanation may be that the lymphatic type is usually due to the bovine bacillus, and children are greater milk drinkers, and again much immunity has been acquired by the time the child is grown. It may invade the viscera and produce a fatal enteritis or peritonitis; the liver, a tubercular hepatitis; the kidneys, a tubercular nephritis.

Tuberculosis of the lungs is the most common and the most fatal form of adult life.

In primary tuberculosis no one knows when it begins, for the beginning is so small that no symptoms are produced; but as the germs multiply and spread and involve new tissue symptoms appear.

In secondary tuberculosis the beginning may be more definite; it follows or augments some other disease, especially those affecting the upper respiratory tract. A child has measles, he does well until the fourth or fifth day, when he takes on a bronchial pneumonia, and the case at once becomes serious and is long drawn out. A case of influenza does likewise, or a case of whooping cough. Broncho-pneumonia is the most common complication, and broncho-pneumonia is a mixed infection in which the tubercle bacillus often plays the leading role. The primary infection irritates and inflames the upper air passages, and prepares a favorable soil for the planting and development of tuberculosis. Many children date the beginning of their ill health to an attack of measles, whooping cough or something. "Johnnie was real well until he had measles and they settled on his lungs; he hasn't been well since." There you have the key to the situation, and this is usually the beginning of active incipient tuberculosis. The most essential fact in the whole matter of tuberculosis is to anticipate it. Tuberculosis should be anticipated and cured before the doctor or the patient knows that it exists. A positive diagnosis can be made only when the bacilli are found in the sputum, and even then you do not know that the tuberculosis is the sole or leading factor in your patient's illness; for, perhaps, all cases of advanced pulmonary tuberculosis are mixed infections. The x-ray is not to be depended upon in incipient tuberculosis; in advanced cases it may confirm what you already know.

Symptoms: Incipient tuberculosis becoming active may give rise to various manifestations; loss of energy, loss of strength, which may have gone on for several months, loss of appetite, loss of weight; "has lost 10 pounds in the last three months;" is slightly nervous; doesn't sleep well at night; headache is not uncommon, and, if to these is added a subnormal temperature in the morning, a slight rise of one degree in the evening, and a rapid pulse rate of say 90 to 100, and, after careful examination, you are unable to find any other cause for the trouble, tuberculosis should be

suspected. The examination should be continued; a temperature and pulse chart may be made morning and evening, and see if it persists. The Von Pirquet test may be used, and I think it is of some value. In adults syphilis and malaria may be confusing; but can usually be excluded after careful study and examination. If the condition has progressed somewhat auscultation may be of value. Fine crepitant rales may be heard over the affected areas, and are best heard at the end of deep inspiration. There may be a slight cough and a feeling of general malaise. He is slightly toxic and must have a source of infection somewhere. He is losing weight, his appetite is poor, he runs a slight evening rise from $99\frac{1}{2}$ to 100 and has a rapid pulse. You have not been able to find any other satisfactory cause, you are justifiable in making a diagnosis at least reserved, and treating him accordingly. The patient's previous and family history may add something to your information. If you wait for further development, until the bacilli appear in the sputum and the x-ray findings are positive, you will have lost valuable time in treating the disease and the patient lost perhaps his best chance for recovery.

Management: Of all the therapeutic measures calculated to benefit the tubercular patient, rest is the remedy par excellence, rest in bed. If the patient is running temperature he should be put to bed and kept there until the temperature is normal and the pulse rate down to 90 or 85. This may take one week or six weeks. Of course, he should have good attention, a well ventilated room or sleeping porch, daily bath, etc. Next in importance to rest is food, and especially milk. Milk somehow seems to possess some anti-tubercular property, and a patient who can drink lots of it stands a good chance to get well. Eggs, fruit and cereals are all good and may be given in liberality. There is such a thing as over feeding a tubercular patient; certainly he does not require more than his assimilative powers will care for.

When the temperature is normal all day and the pulse rate down to 90 or 85 the patient is allowed to be up a few hours each day; but should observe regular rest hours, rest in bed, say from 10 to 12 and from 2 to 5. His hours for being up may be increased as he gets better, but it must be remembered that the fight with tuberculosis is going to be long drawn out and the patient will do better if he bears this in mind.

In all tubercular cases, and particularly if the patient is moderately advanced, he should by all means go to a sanitarium. Here he will not only be treated for his condition, but he will be educated; when he leaves he will know how to care for himself and that may mean life to him.

In children the treatment of tuberculosis is easier. I believe they respond more easily than grownups. Just good nourishment and rest in bed for a while will usually start the youngster on the road to health. Of course, they should be kept under observation. They should be examined and weighed at regular intervals; the weight will tell the whole story. When he is gaining, he is gaining; when he is losing, he is losing. In the great majority of cases there is no disease that responds more easily to intelligent management than incipient active tuberculosis.

Suspect it early; remove visible foci of infection. So far as it is possible, improve his environment, if it is not good. Proper rest and proper diet with an abundance of fresh air and sunshine will work wonders in this disease.

A quart of good sweet milk a day,
Will often keep this pest away.

Don't wait to make a positive diagnosis. If you do you may lose half your patient's chance of recovery.

Until the recent past physicians were slow to suspect incipient tuberculosis. They did not hunt for it, therefore they did not find it until it was advanced. When anybody can look at a patient and know that he has consumption, about all the time he has left is to go west and die.

But the time has come in the history of tuberculosis when the past and the future touch hands. No longer do we wait for these late manifestations, for we have learned that tuberculosis, like all other things, has a beginning; that the beginning most often is in childhood; that the average child is possessed of wonderful recuperative and curative powers; that tuberculosis usually attacks the person who is already sick; that the greatest antidote to tuberculosis is to keep the body one hundred per cent fit; that keeping the body fit is largely a question of hygiene, sanitation and education; that care of the tubercular child will save you the trouble of caring for the consumptive adult.

Solomon gave us the paramount prescription for tuberculosis when he said, "Bring

up the child in the way he should go, and when he gets old, he will not depart from it."

Abstract

EARLY DIAGNOSIS OF UTERINE CANCER

Emil Novak, Baltimore (Journal A. M. A., March 16, 1929), stresses the fact that simple pelvic examination is not sufficient in making the diagnosis in many cancer cases. The physician should, in all suspicious cases, see that cancer is ruled out. This will mean biopsy in suspicious lesions of the cervix, diagnostic curettage in suspicious bleeding from the uterus. If early cancer of the cervix is found, the patient has at least a fifty-fifty chance for cure. If early adenocarcinoma of the uterus is found, her chances of cure should be about two out of three. Any physician can diagnose late cancer, but physicians should familiarize themselves with the clinical appearance of early cancer and of cervical lesions that are to be regarded with suspicion. Even if proved benign, such lesions are important predisposing causes of cervical cancer, and their correction, usually very easy, does much to protect the patient from cancer. The danger of biopsy, if any exists, is far more than counterbalanced by the life-saving information it often yields. There is no other way of making the diagnosis in the early stages of the disease. The same statement may be made with regard to diagnostic curettage in suspicious bleeding of intra-uterine origin. Neither biopsy nor diagnostic curettage is of unqualified value, however, unless combined with competent pathologic examination. The ideal is of course, that the surgeon himself should be a good pathologist. Although there is much discussion of the treatment and the histologic classification of the tumor, the fact still remains that the most important single factor is the duration of the disease. Hence the basic importance of biopsy and diagnostic curettage which are essential in the recognition of the really early stage.

CONTRACT PRACTICE

Section 2. It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession.—*Principles of Medical Ethics of the American Medical Association.*

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Notice of deaths, removals from the State, changes of
location, etc., are requested.

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Editorials

TUBERCULOSIS

The National Tuberculosis Association is
for a second time launching a nation-wide
publicity campaign on the importance of the
annual physical examination for the detection
of early tuberculosis. The Arkansas Tuber-
culosis Association is requesting every County
Medical Society to assist with the campaign
in three ways:

First, by devoting at least a part of the
Society's April program to the discussion of
the scheme of classification and diagnostic
points in tuberculosis as set out in the leaflet
which will be distributed to the County Med-
ical Societies.

Second, by appointing a committee of speak-
ers from the State Medical Society who will
address audiences arranged by the local tu-
berculosis association chairman.

Third, by appointing a committee to con-
duct discovery clinics which may be arranged
by the local tuberculosis association chairman.

It is unfortunately true that most people
go to a doctor only when active disease has
developed. The doctor himself is not in a
strategic position to emphasize the value of
his own services. But the whole history of
the public health movement shows that with
increased public understanding, demand for
the physician's service grows. It is only by
co-operation between medical and lay leaders
that an uninformed public will appreciate
the physician's value to the person in appar-
ent health, and such a movement as the Early
Diagnosis Campaign is an ideal opportunity
for that co-operation.

The following is a copy of the classification
and diagnostic points which has been prepared
by the National Tuberculosis Association for
the use of physicians:

Classification of Pulmonary Tuberculosis at Time of Examination

I MINIMAL LESION

Slight lesion or lesions limited in total vol-
ume to that above the second chondrosternal
injunction and fifth thoracic vertebra of one
side. No serious tuberculosis complications.

POSSIBLE SYMPTOMS

A. *Slight or None*

Slight or no constitutional symptoms in-
cluding, particularly, gastric or intestinal
disturbance or rapid loss of weight;

slight or no elevation of temperature (not over 99.5 degrees F. after rest) or acceleration of pulse (not over 90 for men and 96 per minute for women after rest) at any time during the 24 hours. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

B. *Moderate*

No marked impairment of function, either local or constitutional.

C. *Severe*

Marked impairment of function, local or constitutional.

II MODERATELY ADVANCED

A lesion of one or both lungs, more widely distributed than under MINIMAL, the extent of which may vary, according to the severity of the disease, from the equivalent of one-third the volume of one lung (consolidation or marked infiltration) to the equivalent of the volume of an entire lung (infiltration with or without evidence of cavity formation, cavities not to exceed in total diameters 2 cm. No serious tuberculous complications.

POSSIBLE SYMPTOMS

- A. *Slight or None* (Same as A above)
- B. *Moderate* (Same as B above)
- C. *Severe* (Same as C above)

III FAR ADVANCED

A lesion more extensive than under MODERATELY ADVANCED. Or definite evidence of marked cavity formation. Or serious tuberculous complications.

POSSIBLE SYMPTOMS

- A. *Slight or None* (Same as A above)
- B. *Moderate* (Same as B above)
- C. *Severe* (Same as C above)

Under this scheme, the following classifications are possible:

Minimal A; Moderately Advanced A; Far Advanced A
Minimal B; Moderately Advanced B; Far Advanced B
Minimal C; Moderately Advanced C; Far Advanced C

Classifications of Subsequent Observations

Apparently Cured—All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

Arrested—All constitutional symptoms and

expectoration with bacilli absent for a period of six months; physical signs, those of a healed lesion; Roentgen findings, compatible with physical signs.

Apparently Arrested—All constitutional symptoms and expectoration with bacilli absent for a period of three months; physical signs, those of a healed lesion; Roentgen findings, compatible with physical signs.

Quiescent—Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs and roentgen findings, those of a stationary or retrogressive lesion; foregoing conditions to have existed for at least two months.

Improved—Constitutional symptoms lessened or entirely absent; cough and expectoration with bacilli usually present; physical signs and Roentgen findings, those of a stationary or retrogressive lesion.

Unimproved—Essential symptoms unabated or increased; physical signs and roentgen findings, those of an active or progressive lesion.

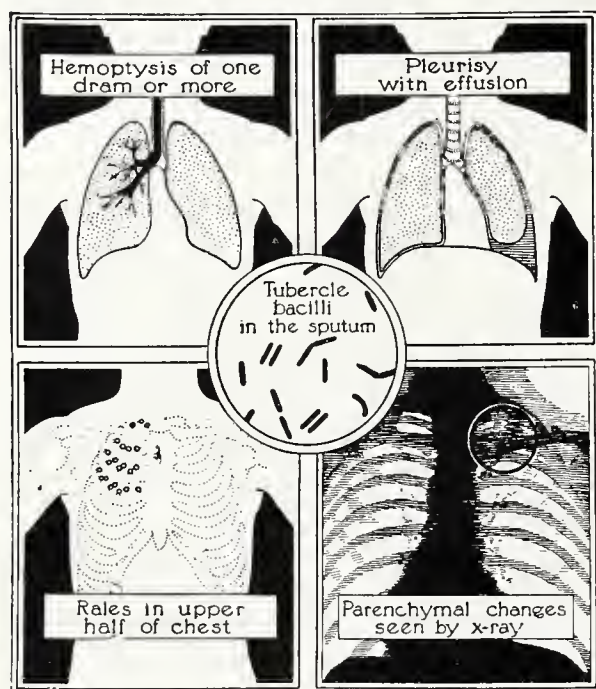
Five Diagnostic Points of Tuberculosis

The diagnosis of tuberculosis cannot be reduced to a formula. After all possible evidence has been collected, it must be evaluated, which requires judgment based on experience and on a visualization of the pathology. Guesswork can be materially reduced, however, by examining the collected evidence in the light of certain "key" symptoms. These are the so-called five criteria of diagnosis of pulmonary tuberculosis and are as follows:

1. A history of hemoptysis of one dram or more without any other known cause.
2. A history of an otherwise unexplained pleurisy with effusion.
3. Definite rales which persist for a week or more in the upper half of the chest.
4. Definite evidence of parenchymal changes seen in the x-ray film, located usually in the upper half of the chest.
5. The demonstration of tubercle bacilli in the sputum on two or more occasions.

The first and second constitute merely *pre-sumptive* evidence; the third and fourth, while at times misleading and possibly due to other causes, very *strongly indicate* pulmonary tuberculosis. The fifth is practically always *conclusive* evidence of pulmonary tuberculosis, although it must be borne in mind

that in rare cases, tuberculosis of the tracheo-bronchial lymph nodes without involvement of the lung parenchyma gives rise to a positive sputum.



Personal and News Items

Dr. Homer Scott, Little Rock, has recently returned from a motor trip to New Orleans.

Dr. A. A. Gilbert of Fayetteville was a recent visitor to Little Rock.

Dr. S. W. Colquitt of Pine Bluff has moved to Beulah, Miss.

Dr. Wylie R. Holloway of Center Ridge was a recent visitor to Little Rock.

Dr. A. G. Henderson, has moved from Pig-gott to Jonesboro, with offices in the Warner Building.

Dr. E. J. Munn of El Dorado has returned from New Orleans where he attended the post-graduate clinics.

Dr. and Mrs. W. B. Grayson and little daughter of McGhee recently visited in Little Rock.

We regret to announce the death of Mrs. Dr. Morgan Smith of Little Rock, which occurred on March 16, 1929.

Dr. F. Walter Carruthers of Little Rock recently held a free clinic at Mt. Ida. Much interest was manifested and the clinic was largely attended.

We are short several copies of Journal for April, 1927. If you can spare this number please mail to Wm. R. Bathurst, Secretary, Little Rock.

Dr. R. H. Guthrie, formerly of Imboden and Little Rock, has been appointed Assistant Superintendent of the Monson Hospital for Nervous Diseases, Palmer, Mass., effective April 1, 1929.

Dr. and Mrs. I. N. McCollum, Conway, have returned from New Orleans, where Dr. McCollum has been doing post-graduate work in the medical school at Tulane University.

CHIPMAN-RUSSELL—Cards are out for the wedding on April 12 of Miss Myrtle Chipman, daughter of W. D. Chipman, State Purchasing Agent, Little Rock, and Dr. A. R. Russell, internist on the staff of the State Hospital for Nervous Diseases, Little Rock.

Major James M. Troutt, Medical Corps, U. S. Army, author of the original article entitled "Differential Diagnosis of Ovarian Cyst, published in the March issue has been transferred from Honolulu to Hot Springs National Park.

At their meeting, March 7th, the Howard-Pike County Medical Society elected the following officers: President, J. L. Roberts, Nashville; Vice-President, E. V. Dildy, Nashville; Secretary-Treasury, Wm. Ridley Lee, Mineral Springs; Delegate to State meeting, T. F. Alford, Murfreesboro; Alternate Delegates, J. S. Hopkins and W. M. Gibson of Nashville.

On March 31, 1929, at the General Hospital in the presence of many friends and many members of the medical profession, a bronze memorial tablet in honor of the late Dr. Carle E. Bentley, was dedicated with appropriate exercises.

At the request of Alderman John H. Tuohey and Dr. A. H. Poppe, Lutheran Minister, the city placed in the main entrance hall a memorial tablet to commemorate the many deeds of charity performed by him.

The tablet is engraved "In grateful memory to Dr. Carle E. Bentley, surgeon, physician, philanthropist, who everywhere and at all times, gave his strength to the weak, his sympathy to the suffering, his help to the op-

pressed, his heart to charity. Thy day has come, not gone; thy sun has risen, not set; thy life is now beyond the reach of death or chance. Not ended, O, gentle heart; hail and farewell."

In his will Dr. Bentley bequeathed \$25,000.00 to the General Hospital.

WOMAN'S AUXILIARY

The executive committee of the Woman's Auxiliary of the Arkansas Medical Society met in Little Rock, March 12. Luncheon was served at the Woman's Club. Mrs. T. G. Porter, President, presiding. Others present: Mrs. J. R. Lynn, Mrs. R. H. T. Mann, Mrs. Marcus T. Smith, Mrs. Dewell Gann, Sr., Mrs. J. M. Phillips, Mrs. P. E. Thomas, Sr., Mrs. C. W. Garrison, Mrs. J. C. Cunningham, Mrs. B. A. Rhinehart, Mrs. B. A. Bennett, Mrs. L. D. Reagan, Mrs. C. E. Oates and Mrs. Wm. R. Bathurst.

Following the reading of the minutes, reports were made by the officers and committee chairmen. It was agreed to recommend, at the Hot Springs meeting, a change in the Constitution to allow the wives of the deceased husbands to become active members in place of associate members.

The following nominating committee was appointed: Mrs. Wm. R. Bathurst, Mrs. R. H. T. Mann, Mrs. J. G. Mitchell, Mrs. W. G. Eberle and Mrs. Marcus T. Smith.

WOMAN'S AUXILIARY, MEDICAL SOCIETY OF VIRGINIA

The Auxiliary's Task in Health Education

The first request of the American Medical Association to the Woman's Auxiliary was that call to arms in educating the public in preventive medicine. To be able to do this work effectively the doctor's wives must first be educated themselves. Through living so close to the profession (wives naturally absorb knowledge from their husbands), they know the value of bodily health and proper living. It is easy for them to teach by their own example that wholesome living and frequent consultations with the family doctor will go much further toward maintaining good health than the treatment of disease.

The American Medical Association has also asked the Auxiliary to sponsor child health. What better work than this for the Woman's Auxiliary? Dr. Charles Mayo has said, "educate a child in health and you educate a whole family."

Health is now commonly listed as the first of the objectives of general education. Today the modern schools have health programs, which are not limited to disease prevention, but to increase human happiness as well. This program aims at the attainment of health itself, not health knowledge merely. Leadership, active, informed, deliberate, should come from the doctor. The teacher and the public health nurse are the health teachers in the schools, the teacher as the regular health instructor and the nurse as the health advisor and assistant. The teacher must be a leader in school health, and must be equipped with knowledge and the art of healthful living herself. So health workers are concentrating on *teachers' training schools*, insisting that *allies not enemies* in the health crusade be graduated as teachers. The Auxiliary can be of great assistance in this work.

Even in schools where these programs are being carried on, the doctor's wives, as members of the Parent-Teacher's Association, can urge mothers to have children examined and all defects corrected before school begins.

National Chairman of Health Education for the Auxiliary, Mrs. George Hoxie, of Kansas City, asks that the State and County Auxiliaries will keep in mind:

First—That personal hygiene; that is, the principles upon which wise living must be based to make possible normal physical development and normal health, is necessarily dependent upon public hygiene.

Second—That since individuals and non-official organizations like ours cannot control public hygiene, every community must have official scientific health departments.

Third—That our first and most important work is to secure such health departments, where they do not already exist; and

Fourth—Where they do exist that our most effective work can be done in co-operating with such official health departments to the end that they be made so effective as to be of the greatest possible good to the people they are maintained to serve.

Everything we do, therefore, from conducting baby clinics to showing health movies should be simply details of the ONE MAIN TASK.

Alice Leigh,

(Mrs. Southgate Leigh),

State Chairman of Health Education,

—Virginia Medical Monthly.

Abstracts

VACCINE THERAPY

Ludvig Hektoen and Ernest E. Irons, Chicago (Journal A. M. A., March 16, 1929), report on the result of a questionnaire on vaccine therapy sent to American physicians. Of 1,261 physicians answering the questionnaire, only seventeen consider vaccine therapy to be a generally useful and superior method of treating infectious diseases. Of the 1,261 physicians, 430 do not use, or have never used, autogenous vaccines in the treatment of any disease, and 142 use or have used them very rarely; 172 physicians report having abandoned the use of autogenous vaccines entirely. Of the 1,261 physicians 577 do not use, or have never used, stock polyvalent vaccines in the treatment of any disease, and forty-nine use or have used them very rarely; 198 physicians report having abandoned the use of stock polyvalent vaccines because of their failure as therapeutic agents. One or more of the 1,261 physicians report using or having used stock vaccines in sixty-three different disease conditions. In every one of these conditions, save otitis media, mastoiditis, acne, furunculosis and whooping cough, 90 per cent or more of the physicians of all four groups do not at present use polyvalent stock vaccines therapeutically. In the majority of instances the percentage not using is nearer 100 than 90. In the sixty-three different disease conditions in which the use of stock polyvalent vaccines is reported, the negative or inconclusive results greatly outnumber the good results in all but a few instances. Of the 1,261 physicians, 140, or 11 per cent, report untoward and harmful effects from the use of stock polyvalent vaccines. The 140 instances of harmful results include a number of cases in which death has been considered due to the use of vaccines, subcutaneously injected. Seventeen cases of asthma are reported to have followed courses of bacterial vaccines, administered to patients who previously were not known to have suffered from asthma. A questionnaire on the use of various forms of vaccine in tuberculosis was sent to tuberculosis specialists, and of the 267 that answered five state that they use tuberculin as the main form of treatment in this disease. The majority counsel against its use in all but quiescent or slightly active cases; sixty-three (23 per cent) report harmful results from the use of tuberculin, au-

togenous or stock vaccines and from the "Non-Virulent T. B. Vaccine." Of these sixty-three, seven have observed deaths to occur which they attribute to the injudicious use of tuberculin; five have observed deaths to occur which they attribute to the use of stock polyvalent vaccines.

PREVENTIVE MEDICINE AS APPLIED TO TUBERCULOUS PATIENTS

The National Tuberculosis Association has procured histories of 1,499 white patients prior to their first admission to a sanatorium. All were at least 15 years of age and all were diagnosed as having pulmonary tuberculosis at the time they entered. The histories, taken by physicians associated with the institutions, were obtained in considerable detail. In addition to questions regarding matters of direct concern to the patient, a few were asked which had a bearing on the welfare of those with whom the patient had come in contact. Tuberculosis is a communicable disease. It follows that the best way to reduce the incidence of the disease is to prevent the bacillus from reaching a second host. Linsly R. Williams and Alice M. Hill, New York (Journal A. M. A., March 9, 1929), state that four questions directly relating to the spread of infection were asked each patient in order to learn something of the extent to which members of the medical profession are practicing preventive medicine so far as tuberculosis is concerned. It was illuminating to find that, though 1,496 of these 1,499 patients had consulted anywhere from one to fourteen physicians each, 625, or 42 per cent, had never been told by any physician how to dispose of the sputum. Of the 871 patients given this instruction, 677 first received it from the physician who first told the patient that his illness was tuberculosis; 107 from the physician immediately following the first, and twenty-four others by physicians still further removed from the one first telling the diagnosis to the patient. A still smaller number of patients were told by any physician that they should keep their dishes apart from those used by other members of their households and that their dishes should be washed separately. Approximately 47 per cent of the patients failed to receive instruction regarding these matters prior to their admission to the sanatorium. The advice to sleep alone was given to 63 per cent of all patients by some physician, more receiving instruction on this particular

point than on any other preventive measure. However, only 61 per cent were advised as to other sleeping arrangements. The question as to other sleeping arrangements comes under the heading of cure rather than prevention, but the answers to it have a bearing on the answers to the question of sleeping alone. Taken together, they indicate that the thought of preventing infection was not always in the physician's mind when he advised his patient to sleep by himself, for 11 per cent of the 945 patients who were told to sleep alone and 12 per cent of the 919 given advice as to other sleeping arrangements were so instructed by a physician seen prior to the one who told the patient that he had tuberculosis. Except as an aid to cure, the early instruction as to sleeping seems unexplainable, especially in view of the fact that the corresponding percentages for those instructed regarding disposal of sputum, use of separate dishes and washing dishes separately were six, seven and seven, respectively. A fact which calls for comment is that proportionately fewer patients who were able to have care in a private sanatorium and received instruction from their physicians prior to admission than had those admitted to public sanatoriums. This was the case with respect to each one of the items noted.

THE REQUIREMENT OF AN INTERN HOSPITAL

Before any hospital can be considered for intern training it needs to be a "registered hospital," said N. P. Colwell, Chicago (Journal A. M. A., March 30, 1929). This means that it must be a worthy institution free from even a suspicion of unethical practices. Admission to the Hospital Register, therefore, is the first step in the approval of a hospital by the American Medical Association, and approval for the training of interns is the next higher list for admission to which, also, further qualifications are essential. A third still higher group is made up of hospitals approved for residencies in the several specialties. With the great improvements brought about in medical schools during the last twenty-five years, the graduates have now obtained a far better training than formerly in the examination and care of patients under the supervision of their physician-teachers, so that the hospitals which provide internships need to have developed improved educational methods hereinafter outlined. The hospital internship is

now recognized as the means of rounding out the student's undergraduate medical training and as the basis for further training leading to some specialty. Early in 1927 the Council adopted a ruling that, after January 1, 1928, no hospital would be approved for interns which did not obtain autopsies in at least 10 per cent of the deaths occurring in the hospital and that, after January 1, 1929, the requirement be advanced to 15 per cent. Briefly stated, to be approved for the training of interns, a hospital needs to develop its educational activities so that the intern will benefit from the improvements which will always result from such activities: (a) the staff members become more alive to the advances in medical knowledge and skill; (b) the equipment will be maintained in accordance with the more modern methods of diagnosis and treatment; (c) the routine procedures in the hospital, including arrangements for heat, light, ventilation and diet will be the most efficient possible; (d) histories of all patients will be kept with extra care for education purposes as well as with the desire for efficiency; (e) the hospital records, also, will be so kept that it may be known at any time just what is going on in the institution, and its autopsy reports can be utilized in case study and in pathologic discussions in connection with its regular staff conferences, and (f) in its persistent search for facts, various measures of educational value will be developed in the hospital which will result not only in a better training for its interns but also in providing the best possible care for its patients. Such activities unavoidably transform the hospital into an excellent continuation school for its staff members. Through the Council's own representatives, the first complete investigation is now being made of all hospitals approved for interns, or which apparently are eligible for such approval. The American Medical Association does not desire authority over any hospital, nor does it even assume that it has such authority. Because hospitals are service stations for the care of sick and injured people, and because physicians are responsible for the reputation of these hospitals, the American Medical Association is naturally interested in them and is proud of the marvelous extent of their improvements and the efficiency with which they are being maintained.

Announcements and Program

FIFTY-FOURTH ANNUAL SESSION

of the

Arkansas Medical Society

HOT SPRINGS NATIONAL PARK

MAY 7, 8, 9, 1929

OFFICERS

President—R. H. T. Mann, Texarkana.
 President-Elect—Thad Cothorn, Jonesboro.
 First Vice-President—H. H. Niehuss, El Dorado.
 Second V.-President—O. M. Bourland, Van Buren.
 Third Vice-President—Sam J. Allbright, Searcy.
 Treasurer—R. J. Calcote, Little Rock.
 Secretary—Wm. R. Bathurst, Little Rock.

COUNCILORS AND COUNCILOR DISTRICTS

First District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties. Councilor, W. W. Verser, Harrisburg. Term of office expires 1929.

Second District—Clebune, Fulton, Independence, Izard, Jackson, Sharp and White Counties. Councilor, L. T. Evans, Batesville. Term of office expires 1930.

Third District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff Counties. Councilor, M. C. John, Stuttgart. Term of office expires 1929.

Fourth District—Ashley, Bradley, Chicot, Cleveland, Drew, Desha, Jefferson and Lincoln Counties. Councilor, W. T. Lowe, Pine Bluff. Term of office expires 1930.

Fifth District—Calhoun, Columbia, Dallas, LaFayette, Ouachita and Union Counties. Councilor, L. L. Purifoy, El Dorado. Term of office expires 1929.

Sixth District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier Counties. Councilor, C. A. Archer, De Queen. Term of office expires 1930.

Seventh District—Clark, Garland, Grant, Hot Spring, Montgomery, Saline and Scott Counties. Councilor, Dewell Gann, Sr., Benton. Term of office expires 1929.

Eighth District—Conway, Faulkner, Johnson, Perry, Pope, Pulaski and Yell Counties. Councilor, Anderson Watkins, Little Rock. Term of office expires 1930.

Ninth District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren Counties. Councilor, Sam G. Daniel, Marshall. Term of office expires 1929.

Tenth District—Benton, Crawford, Franklin, Logan, Madison, Sebastian and Washington Counties. Councilor, S. J. Wolfermann, Fort Smith. Term of office expires 1930.

Delegates to the A. M. A.—William R. Bathurst, Little Rock (1929); Homer Scott, Little Rock (1930).

COMMITTEES

SCIENTIFIC PROGRAM

R. J. Calcote, Little Rock, Chairman; A. S. Buchanan, Prescott; Geo. B. Fletcher, Hot Springs.

SCIENTIFIC EXHIBIT

Wm. P. Parks, Hot Springs, Chairman; H. E. Longino, Texarkana; E. C. Moulton, Fort Smith.

MEDICAL LEGISLATION

Frank Vinsonhaler, Little Rock, Chairman; M. L. Norwood, Lockesburg; St. Cloud Cooper, Fort Smith; E. E. Barlow, Dermott; W. M. Majors, Paragould; Thad Cothorn, Jonesboro.

STUDENT LOAN FUND

E. F. Ellis, Fayetteville, Chairman, Wm. R. Bathurst, Little Rock; Robert Caldwell, Little Rock.

NECROLOGY

Don Smith, Hope, Chairman; Geo. M. Eckel, Hot Springs; Wm. M. Gibson, Nashville.

PUBLICITY

S. F. Hoge, Little Rock, Chairman; O. H. King, Hot Springs; W. P. Cooksey, Magnolia.

CANCER CONTROL

Dewell Gann, Jr., Little Rock, Chairman; P. R. Watkins, Mena; J. C. Hughes, Hoxie.

INFANT WELFARE

Morgan Smith, Little Rock, Chairman; J. S. Jenkins, Pine Bluff; Geo. D. Murphy, El Dorado.

HOSPITALS

A. E. Chace, Texarkana, Chairman; John S. Jenkins, Pine Bluff, Edward F. Ellis, Fayetteville; James I. Scarborough, Little Rock; P. W. Lutterloh, Jonesboro.

ANNOUNCEMENTS

REGISTRATION

The registration desk will be located in the Convention Hall and open from 8:00 a. m. to 5:00 p. m.

The delegates are requested to register as early as possible, so that the official roll of the House may be made up and that the House of Delegates may proceed with its business, beginning promptly at 9:30 a. m. Members and visiting ladies are also requested to register and receive the official badge and program.

The members of the Woman's Auxiliary will also please register and receive a program and the official badge of their organization.

MEETING OF THE COUNCIL

The Council of the Arkansas Medical Society will meet at noon with luncheon in the private dining room, Arlington Hotel, immediately following the adjournment of the morning session.

COMMERCIAL EXHIBIT

L. G. Martin, Chairman

A number of high-class commercial exhibits will be on display and our members are urged to visit this interesting exhibit of books, instruments, office equipment and products of many manufacturing plants.

SCIENTIFIC EXHIBIT

D. C. Lee, Chairman

This exhibit will be conducted by the Committee on Scientific Exhibits, D. C. Lee, Chairman, W. H. Deaderick, and J. L. Greene. Our members are urged to attend and lend their support to the committee's labors and assist in developing this attractive addition at our meetings.

GOLF TOURNAMENT

Hot Springs Country Club

The Dewell Gann Loving Cup is the prize for the high score in golf at all State Meetings.

CIVIC CLUBS

The following civic clubs will meet during the session and have extended a cordial invitation to the visiting members of these respective clubs who attend the State Medical Convention:

Tuesday Noon—

Wednesday Noon—Rotary, Arlington Hotel.

Thursday Noon—

HOST: Garland County-Hot Springs Medical Society.

President—H. King Wade.

Secretary—G. A. Hebert.

LOCAL COMMITTEES

Reception—O. E. Biggs, Chairman, L. R. Ellis, W. G. Klugh, V. P. Diederich and Grayson E. Tarkington.

Publicity—H. W. Brewer, Chairman and Miss Alta Smith.

Finance—J. H. Chesnutt, Chairman; H. P. Collings, F. J. Scully, J. T. Jelks.

Meeting Place: O. H. King, Chairman, T. N. Black, W. R. Knoefel.

Information—E. A. Purdum, Chairman; Z. N. Short, F. S. Tarleton, C. S. Moss, C. S. Miller.

Transportation—A. H. Tribble, Chairman; H. King Wade, Floyd Clardy, E. M. McKenzie, W. H. Connell.

Entertainment: W. T. Wootton, Chairman; A. G. Sullivan, J. H. Chesnutt, J. M. Proctor, Geo. B. Fletcher.

Badges: O. J. McLaughlin, Chairman; J. H. Chesnutt, H. C. Chenault, G. A. Hebert.

Golf—Lloyd Thompson, Chairman; Wm. F. Porter, C. H. Nims.

Scientific Exhibits—D. C. Lee, Chairman; W. H. Deaderick, J. L. Greene.

Commercial Exhibits—L. G. Martin, Chairman; Foster Jarrell, S. B. Steele, G. C. Coffey.

HOUSE OF DELEGATES

First Meeting—Convention Hall

The regular annual meeting of the House of Delegates of the Arkansas Medical Society will be held on May 7, 9:30 A. M.

R. H. T. Mann, President.

Wm. R. Bathurst, Secretary.

Meeting called to order by R. H. T. Mann, President.

Appointment of Credentials Committee and their report.

Calling roll of Delegates.

Adoption of the Minutes of the Fifty-Third Annual Meeting as published in the July, 1928, issue of the Journal of the Arkansas Medical Society.

Appointment of Reference Committee.

President's Address to the House of Delegates.

Report of Committees.

Scientific Program—R. J. Calcote, Chairman.

Scientific Exhibit—Wm. P. Parks, Chairman.

Medical Legislation—Frank Vinsonhaler, Chairman.

Supplemental Report—By our Attorney, Hon. Peter Deisch, Helena.

Necrology—Don Smith, Chairman.

Publicity—S. F. Hoge, Chairman.

Cancer Control—Dewell Gann, Jr., Chairman.

Infant Welfare—Morgan Smith, Chairman.

Hospitals—A. E. Chace, Chairman.

Student Loan Fund—E. F. Ellis, Chairman.

Entertainment—W. T. Wootton, Chairman.

Report of the Council—Dewell Gann, Sr., Chairman, and L. L. Purifoy, Secretary.

Report of the State Board of Examiners—J. W. Walker, Secretary.

Report of the Delegates to the A. M. A.

Report of the Secretary.

Report of the Treasurer.

New Business.

Selection of the Nominating Committee.

SELECTIONS TO FILL VACANCIES ON THE STATE BOARD OF MEDICAL EXAMINERS

Vacancies occur in Second, Third, Sixth and Seventh Congressional Districts.

Counties composing these districts are as follows:

Second—Stone, Sharp, Randolph, Lawrence, Fulton, Izard, Independence, White, Cleburne, Jackson, Prairie and Monroe.

Third—Washington, Benton, Madison, Carroll, Newton, Boone, Searcy, Baxter, Marion and Van Buren.

Sixth—Garland, Hot Spring, Saline, Dallas, Grant, Desha, Cleveland, Lincoln, Drew, Jefferson, Arkansas and Lonoke.

Seventh—Hempstead, Clark, Nevada, Columbia, Union, Ouachita, LaFayette, Calhoun, Bradley, Ashley and Chicot.

The members now serving the above districts are: Dr. J. T. Palmer, Pine Bluff; Dr. H. A. Ross, Arkadelphia; Dr. J. W. Walker, Fayetteville, and Dr. S. J. Allbright, Searcy.

Drs. Palmer, Ross and Walker have served two terms of four years each and are not eligible for re-election. Dr. Allbright has served only one term and is eligible for re-election.

CLINICAL SESSION

Convention Hall

Tuesday, May 7—1:30 P. M.

“Seasonal Hay Fever”—Ray M. Balyeat, Oklahoma City, Okla.

“Cerebro-Spinal Lues in Childhood”—Isaac A. Abt, Chicago, Ill.

“Modern Methods in Obstetrics”—G. D. Royston, St. Louis, Mo.

“Hypothyroidism and Related Disorders”—C. M. Grigsby, Dallas, Tex.

“Heliotherapy in the Treatment of Tuberculosis” (with Motion Picture Demonstration)—Alexius M. Forster, Colorado Springs, Colo.

GENERAL SESSION

Convention Hall

Tuesday, May 7—8:00 P. M.

Calling of the Society to Order—R. H. T. Mann, President.

Invocation—Rev. Charles Collins, St. Lukes Episcopal Church.

Address of Welcome for Hot Springs—Hon. Leo. P. McLaughlin, Mayor.

Address of Welcome for the Garland County-Hot Springs Medical Society—O. H. King.

Response to the Address of Welcome on Behalf of the Arkansas Medical Society—

President's Annual Address—R. H. T. Mann, Texarkana.

“Arthritis”—Robert McE. Schaufler, Kansas City, Mo.

“Medical Economics”—Preston Hunt, Texarkana.

MEMORIAL SESSION

First Presbyterian Church

Wednesday, May 8—8:30 to 9:30 A. M.

Conducted by the Committee on Necrology—Don Smith, Hope, Chairman; Geo. M. Eckel, Hot Springs; Wm. M. Gibson, Nashville.

Invocation—Rev. Stewart Oglesby, Pastor First Presbyterian Church.

DECEASED MEMBERS

George Snider Brown, Conway, May 11, 1928.

Fred A. Hipolite, DeVall's Bluff, July 19, 1928.

Jacob L. Hare, Wynne, July 29, 1928.

Richard Calvin Lynch, Success, August 12, 1928.

Wallace Dickinson Rose, Little Rock, August 17, 1928.

Clinton A. Rice, Rogers, October 7, 1928.

William W. Rice, Prescott, October 29, 1928.

Philip Emerson Thomas, Sr., Clarendon, October 31, 1928.

James Dogan Hart, Dardanelle, December 15, 1928.

John S. McMurtrey, Rison, December 23, 1928.

George Davis Huddleston, Conway, January 3, 1929.

Charles B. Paddock, Fayetteville, January 3, 1929.

Robert Scott Crebs, Olvey, February 14, 1929.

John T. Fleming, Perryville, February 25, 1929.

Robert Andrew Simpson, Hot Springs, March 31, 1929.

SCIENTIFIC SESSION

Convention Hall

Wednesday, May 8—10:00 A. M.

“Operation for Inguinal Hernia” (Lantern Slide Demonstration)—W. F. Smith, Little Rock.

“Diagnosis and Treatment of Diabetic Coma”—S. C. Fulmer, Little Rock.

“Angina Pectoris”—L. F. Barrier, Little Rock.

“Heart Irregularities”—Arthur G. Sullivan, Hot Springs.

“Pericarditis with Effusion, Report of a Case”—W. G. Hodges, Malvern.

1:30 P. M.

“Instances of Various Types of Facial Repair” (Lantern Slide Demonstration)—Vilray P. Blair, St. Louis.

“Orthodontics, Its Aims, Necessity and Results in the Treatment of Mal-Occlusions of the Teeth” (Lantern Slide Demonstration)—Clarence W. Koch, D.D.S., Little Rock.

“Practical Blood Chemistry”—M. J. Kilbury, Little Rock.

“Classification and Treatment of Diarrheas in Arkansas, based on my private practice”—Paul H. Power, Pine Bluff.

"Prevalence and Prevention of Deafness Among School Children"—Robt. Booth Moore, Little Rock.

"Mucus Colitis"—H. E. Murry, Texarkana.

"Abdominal Pregnancy, With Report of Two Cases"—J. T. Palmer, Pine Bluff.

"Tetanus, Report of Two Cases"—A. G. Harrison, Searcy.

8:00 P. M.

"What the Gastro-Intestinal Study Means"—W. R. Brooksher, Jr., Fort Smith.

"Some Phases of Streptococcic Infection"—S. F. Hoge, Little Rock.

"Five Years Experience with Radium Therapy in Uterine Conditions"—J. S. Wilson, Lake Village.

"Disorders of Menstruation"—J. P. Delaney, Little Rock.

"Meckel's Diverticulum"—Chas. P. McCracken, Jonesboro.

SCIENTIFIC SESSION

Convention Hall

Thursday, May 9—8:30 A. M.

"Some Observations in the Treatment of Gonorrhea"—Thos. N. Black, Hot Springs.

"The Problem of Pyelitis in Children"—Clinton K. Smith, Kansas City, Mo.

"A Classification of the Nephritides"—J. C. Beard, Pine Bluff.

Cesarean Section. Report of Cases—T. J. Bush, El Dorado.

"Conditions Simulating Sciatica"—F. J. Scully, Hot Springs.

"Sterilization of Infected Wounds"—L. V. Parmley, Jerome.

"The Surgical Treatment of Bronchiectasis"—J. K. Smith, Texarkana.

"Diseases of the Lymphatic System"—R. H. Willett, Jonesboro.

FINAL MEETING OF THE HOUSE OF DELEGATES

Convention Hall

Thursday, May 9—1:30 P. M.

Roll Call.

Report of the Nominating Committee.

Election of Officers.

President-Elect, First Vice-President, Second Vice-President, Third Vice-President, Secretary, Treasurer, Five Councilors.

Report of Committees.

Further New Business.

Adjournment.

FINAL GENERAL SESSION

(Thursday afternoon, May 9, immediately after adjournment of the House of Delegates).

Calling meeting to order—R. H. T. Mann, President.

Unfinished Business.

Presentation of President and President-Elect.

New Business.

Selection of Place for Next Meeting.

Adjournment.

REPORT OF THE COMMITTEE ON MEDICAL LEGISLATION

FRANK VINSONHALER, *Chairman*

To the House of Delegates, Arkansas Medical Society:

GENTLEMEN:

The Chairman of the Committee on Medical Legislation of the Arkansas Medical Society begs leave to report the passage of the Basic Science Law, approved by the Bureau of Legal Medicine and Legislation of the American Medical Association.

This Law has been amended in two particulars: viz., upon the addition of the State Superintendent of Public Instruction to the Board of Examiners as an ex-officio member, and by an amendment prohibiting the appointment of any member of the faculty of the University of Arkansas School of Medicine upon the Board of Examiners. With these two exceptions, the Law is substantially as sponsored by the American Medical Association. This is the most constructive and useful piece of medical legislation in the history of the State. It meets the objections to our multiple board system and prevents, so far as law can prevent, the entrance of medical criminals into our State.

The Basic Science Law, first known as Senate Bill No. 55, was introduced by Senator Hardy of Faulkner County, who championed the Bill in the Senate efficiently and bravely during the whole of the contest. Too much credit cannot be given Senator Hardy for service to the medical profession. It has been suggested that Senator Hardy, at sometime, should be recognized by the profession in a more substantial way.

The Bill came before the Committee on the Practice of Medicine, of which Senator Hardy was Chairman. It was bitterly attacked by the irregulars, headed by attorneys and other individuals who endeavored to secure from the committee an unfavorable report. The Bill, however, was reported back, and its passage recommended. It was passed by the Senate by a vote of 26-4 and sent to the House. There the Bill was championed by Doctor Morgan Smith, Representative from Pulaski County, Mr. Campbell of Sevier County, Colonel James of Carroll County and Representative Grubbs of Chicot County. The opposition of the Speaker and his arbitrary rulings on the order made it almost impossible to secure a passage of the Law. The principal opposition came from the Speaker and Mrs. McRaven, Representative from Pulaski County. The Committee on the Practice of Medicine in the House tacked on an amendment, a vote of 7-2, which amended the Bill in such a manner as to absolutely destroy its efficiency, changing the personnel of the Board of Examiners to one regular physician, one eclectic, one homeopath, one chiropractor and one osteopath. The Bill lingered in the House, the Speaker preventing its securing consideration for a considerable length of time.

Finally, the Senate Bill, No. 55, was tabled and a new bill introduced by Doctor Morgan Smith and Mr. Campbell of Sevier County embodying the features of the Bill as it now is. Unfortunately, in copying the Bill, the amendment preventing the appointment of teachers in the School of Medicine was omitted. The Bill by very clever parliamentary tactics by Doctor Smith was passed receiving a vote of 61-27.

On return of the Bill for concurrence in the Senate, it was discovered that the amendment had been omitted. It, therefore, became necessary to present the measure anew in the regular order. This again led to a determined fight by the enemies of the Bill. The Bill again passed the Senate by a vote of 27-2. Upon its coming back to the House, the Speaker withdrew his opposition and assisted in the passage of the Bill, and it passed the House by a vote of 58-12.

On the last day of the session the Bill was signed in the presence of the Chairman of the Committee on Medical Legislation and Honorable Peter A. Deisch, our attorney, by Governor Parnell and, therefore, became a Law.

Too much credit cannot be given to the Honorable Peter Deisch of Helena, our attorney and counsellor in all the battles that occurred during the passage of the Law. He proved to be skilled in parliamentary tactics, full of energy and devoted to the interests of the profession. He deserves a debt of gratitude at the hands of the profession that can never be repaid.

Along with Mr. Deisch is Doctor M. L. Norwood of Lockesburg, who had charge of the fate of the Bill as a representative of the Arkansas Medical Society. Doctor Norwood gave up his practice, spent a great deal of time in the Legislature and was ably assisted by his brother, the Honorable Hal Norwood, Attorney-General of Arkansas. Several times these two men rescued the Bill from certain defeat.

Doctor R. H. T. Mann, our President, was present on various occasions. The medical profession of Hope, Prescott and many other towns came to our assistance. Doctor Stevenson of Fort Smith, the most prominent eclectic practitioner in the State, came to our aid and spent some time before the Legislature in the interest of the Bill. He, too, should be gratefully remembered by all of our profession. Doctor Morgan Smith is to be commended for his patience, self-restraint and tactfulness in securing the final result. Our worthy Secretary, Doctor Bathurst, gave valuable assistance to the Committee.

It would take too much space to enumerate all who gave splendid assistance in this work. It is sufficient to say the effort put forth by the profession in the passage of the Bill has heartened and united our State Society more than any influence that has ever operated. The writer desires to thank all who took part in this fight and to say that it is the greatest privilege and pleasure that has come to him during his professional life in this State.

Below are given the tabulated votes of the representatives and Senators upon this Bill at various times in order that the profession may know how their representatives stood upon this Bill which so vitally affected our interests.

This is the roll call of the Senate on the amendment which would have put on the Board of Examiners regular physician, an eclectic, a homeopath, a chiropractor and an osteopath, thereby destroying the Bill. Those voting for the amendment are: Caldwell, Dillon, Hollensworth, Grabel, Kimsey, Tate McGehee, McKennon, Milum, Raney and Wahlquist. Those voting against the amendment are: Beasley, J. F. Brewer, Butt, Clerget, Counts, Danner, Gentry, George, Hall, Hardy, Hutto, Jimerson, Jones, Purkins, Quarles, Rankin, Thornton, Warnock and Wilson.

This is the roll call of the Senate to refer the Bill back to the Committee which would have had the effect of indefinitely postponing the Bill and defeating it. Those voting to refer the Bill back to the Committee are: Caldwell, Grabel, Hollensworth, Scott McGehee, Milum and Wahlquist. Those voting against referring the Bill back to the Committee are: Beasley, C. I. Brewer, J. F. Brewer, Butt, Clerget, Counts, Danner, Gentry, George, Hall, Hardy, Hutto, Jimerson, Jones, Kimsey, Purkins, Quarles, Raney, Rankin, Thornton, Warnock and Wilson.

This is the final vote after opposition had been abandoned. Those voting for the passage of the Bill in the Senate are: Beasley, J. F. Brewer, Butt, Caldwell, Clerget, Counts, Danner, Dillon, Gentry, George, Hall, Hardy, Hutto, Jimerson, Jones, Kimsey, Scott McGehee, Tate McGehee, McKennon, Milum, Purkins, Quarles, Raney, Rankin, Thornton, Warnock and Wilson.

Those voting against the passage of the Bill in the Senate are: Grabel and Wahlquist.

Those voting for the passage of the Bill in the House were: Alexander, Armstrong, Atkins, Baker, Balch Colvin, Bransford, Brown of Monroe, Campbell of Sevier, Cannon, Cardwell, Christy, Clark of Faulkner, Clark of Grant, Clayton, Craig of Lawrence, Craig of Union, Craig of Jefferson, Donhom, Gordon, Grubbs, Harris, Hester, Hughes, Jackson, Jacobs, James, Johnston, Jones, Kendrick, Killian, Kitchens, Lookadoo, McGehee, McLary, McNeal, Mixon, Monk, Neale, Owen, Pearce of Columbia, Plank, Pruitt, Rollwage, Rothrock, Roundtree, Ryan, Sessions, Shaver, Shelton, Smith of Garland, Smith of Jefferson, Smith of Pulaski, Thomas, Thompson, Ward, Wardlaw, Webster, Wheatley, Winfree and Winham. Those voting against the passage of the Bill in the House are: Blackburn, Bolton, Brown of Cleveland, Bullock, Butler, Cole, Connell, George, Gray, Hale, Holland, Matheny, McFerrin, McRaven, Pierce of Ashley, Plunkett, Purdy, Robinson, Sellers, Smithers, Smith of Fulton, Tedford, Tolleson, Turney, Wade and the Speaker.

Respectfully and cordially submitted,

Frank Vinsonhaler, Chairman.

Program

WOMAN'S AUXILIARY of the ARKANSAS MEDICAL SOCIETY FIFTH ANNUAL MEETING

OFFICERS

President—Mrs. T. G. Porter, Hazen.
President-Elect—Mrs. C. G. Hinkle, Batesville.
Vice-President—Mrs. C. E. Oates, Little Rock.
Secretary—Mrs. J. R. Lynn, Hazen.
Publicity Secretary—Mrs. Wm. R. Bathurst Little Rock.
Treasurer—Mrs. B. A. Rhinehart, Little Rock.
Parliamentarian—Mrs. Dewell Gann, Sr., Benton.
Historian—Mrs. C. W. Garrison, Little Rock.

DIRECTORS

Mrs. R. H. T. Mann, Texarkana.
Mrs. P. E. Thomas, Sr., Clarendon.
Mrs. J. B. Wharton, El Dorado.
Mrs. S. A. Drennen, Stuttgart.

PAST PRESIDENTS

Mrs. C. W. Garrison, Little Rock.
Mrs. Dewell Gann, Sr., Benton.
Mrs. Chas. Travis Drennen, Hot Springs.

STANDING COMMITTEES

Organization: Mrs. E. L. Thompson, Chairman, Hot Springs; Mrs. R. H. T. Mann, Texarkana; Mrs. P. E. Thomas, Sr., Clarendon; Mrs. S. A. Drennen, Stuttgart; Mrs. J. B. Wharton, El Dorado; Mrs. O. J. T. Johnston, Batesville; Mrs. T. F. Hudson, Luxora; Mrs. F. D. Smith, Blytheville; Mrs. F. C. McGuire, Augusta.

Juniors: Mrs. J. C. Cunningham, Little Rock.

Public Relations: Mrs. C. T. Drennen, Chairman, Hot Springs; Mrs. L. L. Purifoy, El Dorado; Mrs. C. W. Garrison, Little Rock; Mrs. C. E. Oates, Little Rock; Mrs. D. A. Rhinehart, Little Rock.

Student Loan Fund—Mrs. C. E. Oates, Little Rock.

Finance: Mrs. B. A. Bennett, Chairman, Little Rock; Mrs. G. S. Brown, Conway; Mrs. M. M. Blakely, Benton.

Education and Public Health: Mrs. L. D. Reagan, Chairman, Little Rock; Mrs. H. K. Wade, Hot Springs; Mrs. C. A. Archer, DeQueen; Mrs. R. C. Kory, Little Rock; Mrs. G. L. Henderson, Conway.

Hygeia: Mrs. W. R. Brooks, Jr., Chairman, Ft. Smith; Mrs. L. H. Lanier, Texarkana; Mrs. T. E. Benton, Lonoke; Mrs. J. H. Kennerly, Batesville.

Memorial: Mrs. F. M. Williams, Chairman; Hot Springs; Mrs. H. M. Kitchens, Waldo; Mrs. P. H. Phillips, Ashdown; Mrs. R. F. Darnall, Little Rock.

Constitution and By-Laws: Mrs. B. A. Rhinehart, Little Rock.

Hostess: Garland County Medical Auxiliary, Mrs. Grayson E. Tarkington, President.

COMMITTEE ON ENTERTAINMENT

Mesdames W. G. Klugh, Chairman; G. C. Coffey, Geo. B. Fletcher, John M. Proctor.

COMMITTEE ON REGISTRATION

Mesdames E. A. Purdum, Chairman; A. H. Tribble, Loyd Thompson, Wm. F. Porter.

COMMITTEE ON AUTOMOBILES

Mesdames Orvis Biggs, Chairman; W. L. Snider, S. B. Steele.

COMMITTEE ON FLOWERS FOR MEMORIAL SESSION

Mesdames O. H. King and D. C. Lee.

PROGRAM

Tuesday, May 7—10:00 to 12:00 A. M.

Registration—Mezzanine, New Arlington Hotel.

Executive Board Meeting, 11:00 A. M.,

Registration—Mezzanine, Arlington Hotel.

BUSINESS SESSION

Arlington Hotel

Tuesday Afternoon—2:00 to 4:00

Meeting called to order by President, Mrs. T. G. Porter, Hazen.

Invocation—Rev. W. C. Watson, Pastor First Methodist Church.

Address of Welcome—Mrs. Grayson Tarkington, President Garland County Auxiliary.

Response—Mrs. W. F. Smith, Little Rock.

Introduction of Mrs. Allen H. Bunce, President American Medical Auxiliary.

Introduction of Mrs. Chas. Willis Garrison, President of Southern Medical Auxiliary.

Address—Dr. R. H. T. Mann, President State Medical Society.

Minutes of 1928 meeting and of subsequent board meetings.

Report of Officers and Committees.

MEMORIAL SESSION

Wednesday—8:30 to 9:30 A. M.

First Presbyterian Church

(Joint meeting with the Arkansas Medical Society).

BUSINESS SESSION

10:00 A. M.—Arlington Hotel

Mrs. T. G. Porter, Presiding

Reading of Minutes.

Continuation of committee reports.

Report of County Auxiliaries.

Report of Woman's Auxiliary of the American Medical Association, Mrs. C. W. Garrison, Little Rock.

Report of Woman's Auxiliary of the Southern Medical Association, Mrs. Wm. R. Bathurst, Little Rock.

Report of Resolutions Committee.

Report of Nominating Committee.

Election of Officers.

Wednesday—1:00 P. M.

Luncheon—Arlington Hotel.

Meeting called to order by the President, Mrs. T. G. Porter.

President's Address—Mrs. T. G. Porter, Hazen.

Address—Mrs. Allen H. Bunce, President American Medical Auxiliary, Atlanta, Ga.

Greetings from Woman's Auxiliary, Southern Medical Association—Mrs. C. W. Garrison, President, Little Rock.

Introduction of President for 1929-1930—Mrs. C. G. Hinkle, Batesville.

Adjournment.

CONSTITUTION AND BY-LAWS

CONSTITUTION

Article I—Name

The name of this organization shall be the Woman's Auxiliary of the Arkansas Medical Society.

Article II—Object

The object of this Auxiliary shall be to extend the aims of the medical profession through the wives of the doctors to various women's organizations which look to advancement in health and education; to assist in entertaining at State, district and county society meetings; to promote acquaintance among doctor's families, that local unity and harmony may be increased.

Article III—Membership

1. The active members shall be the wives of doctors belonging to the Arkansas State Medical Society.

2. The widow of a deceased member of the Arkansas Medical Society may become an associate member of this organization.

3. Honorary membership may be conferred at the discretion of the Auxiliary upon recommendation of the Executive Board.

Article IV—Officers

The officers of this organization shall be a President, a President-Elect, a Vice-President, a Secretary, a Publicity Secretary, a Treasurer, and four Directors.

Article V—Executive Board

1. These officers together with the chairmen of the standing committees, the county presidents or their appointees, and the outgoing State President, shall constitute the Executive Board.

2. The Executive Board shall have power and authority to conduct the affairs of the organization during the interim between its meetings, but it shall not undertake new plans without consulting the State Medical Society, provided no action taken by the organization be modified and no debt or liability except for current expenses be incurred.

Article VI—Elections

1. The officers, with the exception of the secretaries and directors, shall be elected by ballot at the annual meeting to serve for one year or until their successor is elected. The Secretary shall be appointed by the President for one year; the directors shall be elected by ballot for a term of two years, two being elected at each annual meeting.

2. A Nominating Committee consisting of five members, no more than two of whom shall be members of the Executive Board, shall be appointed by the Executive Board at a meeting before each annual meeting. It shall be the duty of this committee to nominate a candidate for each office to be filled at the next annual meeting. The committee shall send a report of these nominations to the Secretary, who shall send a copy to each County Auxiliary in the call for the annual meeting.

3. A vacancy occurring in an office other than that of Secretary, shall be filled by the Executive Board for the unexpired term.

Article VII—Meetings

1. The meetings of this organization shall be held at the same time and place as the State Medical Society.

2. A regular meeting of the board shall be held immediately before and after each annual meeting of the Auxiliary. Meetings may be called by the President, and shall be called upon the written request of three members of the board.

Article VIII—Delegates

1. Each County Auxiliary shall be entitled to send to each annual meeting, its President, two delegates and their alternates for every twenty-five paid-up members or major fraction thereof, each Auxiliary being entitled to at least one delegate and alternate, irrespective of the number of members. These accredited delegates with the members of the Executive Board shall form the voting body. Each delegate shall present the receipt of dues of her County Auxiliary as her credentials.

2. There shall be appointed by the Executive Board as many delegates to the Southern Medical Association and American Medical Association Auxiliary meetings as their constitutions provide.

Article IX—Dues

The membership dues to the Woman's Auxiliary to the Arkansas Medical Society shall be \$1.00 per capita, from which the necessary amount will be taken to pay dues to the American Medical Association Auxiliary. Dues should be paid through the County Auxiliaries, where one exists, not later than March 1st.

Article X—County Auxiliaries

1. A County Woman's Auxiliary to the County Medical Society shall be organized, if possible, in each county of the State that has a Medical Society, provided such organization is approved by the County Medical Society. The object of a county Auxiliary shall be to promote the objects and interests of the State Woman's Auxiliary and to do such other work as its County Medical Society may from time to time assign it to do. Each County Auxiliary is authorized to make its own rules for the transaction of its business and the admittance of its members, provided such rules do not conflict with the rules of this organization or of the American Medical Association Auxiliary.

2. Each County Auxiliary shall send a report to the State Secretary on or before April 1 of each year, which shall contain the names and addresses of its officers and chairmen of standing committees, and the number of its paid-up members.

3. Each County Auxiliary shall, insofar as practicable, provide for county standing committees to correspond to the State standing committees. It shall be the duty of the county committee to carry out the plan submitted by the State committees.

Article XI—Amendments

This constitution may be amended at any regular meeting of the Auxiliary, provided written notice has been sent each County Auxiliary not less than two months prior to said meeting.

BY-LAWS

1. *Duties of Officers.* (a) The duties of the President, Vice-President, Secretary and Treasurer shall be those which usually devolve upon such officers.

(b) The President-Elect shall become President the following year.

(c) No officer or committee shall undertake any plan or obligate the Auxiliary in any way unless said plans have been passed on by the Executive Board, which inturn shall consult the State Medical Society.

2. *Committees.* (a) The President and the Executive Board shall have power to create such committees as become necessary to promote the welfare of the Auxiliary.

(b) The standing committees shall be: (1) Organization, (2) Finance, (3) Constitution and By-Laws, (4) Memorial, and (5) Public Relations.

3. *Meetings.* All meetings of Auxiliary and the Executive Board shall be conducted according to the regular order of business and parliamentary law which usually governs the conduct of such meetings.

4. *Quorum.* (a) Five members of the Executive Board shall constitute a quorum.

(b) Ten voting members shall constitute a quorum at any general meeting of the organization.

5. *Amendments.* These by-laws may be amended at any meeting of the Executive Board or at the annual meeting of the Auxiliary by a two-thirds vote of the members present, provided such amendments do not conflict with the spirit of the constitution.

County Societies

MILLER COUNTY

(Reported by HERMAN CASTILE, Sec.)

The Miller County Medical Society met in the Banquet Room of the Y. W. C. A. Building, in the form of a Smoker banquet. Dr. J. T. Robison, President, presiding.

Present: Decker Smith, Hunt, Robison, Castile, Lanier, Middleton, Tyson, Williams, Roberts, Fuller, Kitchens, York, Collom, White, Hibbetts, J. K. Smith, Beck, Klein, R. H. T. Mann, Albert Mann, C. A. Smith and Gardner.

Dr. White read a paper entitled, "Obstetrics in the home."

POPE COUNTY

(Reported by W. P. SCARLETT, Sec.)

The Pope County Medical Society met in Russellville, March 28, at 7:00 P. M. A luncheon was served at the Angher House, after which the following officers were elected for the ensuing year: President, A. B. Tate; Vice-President, Robert Hood; Secretary, W. P. Searlett; Delegates to the State Meeting, G. C. Webb; Alternate, R. L. Smith.

Present: Webb, Hood, Tate, Smith, Jones, Mason, Truett, Campbell, Yates, Cowan, Williamson, Haster and Searlett.

A committee was appointed to draft a resolution on the death of Dr. Jerome Wright.



Obituary

SIMPSON, ROBERT ANDREW—Dr. Robert Andrew Simpson of Hot Springs, died March 31, 1929. Aged 56.

Dr. Simpson was a native of Mississippi, but had practiced medicine in Hot Springs for more than twenty-five years. He is survived by his widow, five daughters, Pauline, Faye, Nan, Gloria and Clyde; one brother and two sisters.



Book Reviews

Folklore of the Teeth.—By Leo Kanner, M. D., Yankton State Hospital, Yankton, South Dakota. Published by The MacMillan Company, New York, 1928.

In the introduction of this work the author states "I have attempted in this book to give an outline of the folklore of the teeth, introducing it at the same time as a new branch of dental science, just as the folklore of medicine is, or should by all means be, considered as a branch of medical science." He further says, "I look upon this book as a rudiment, or as a skeleton around which a public with aroused interest in its contents will gradually build up a real living body."

The contents is divided into six parts: Part I, Number, Shape and Eruption; Part II, Popular Dental Hygiene; Part III, Toothache and Its Cure; Part IV, The Artificial Deformation of the Teeth; Part V, Teeth as Used Outside of the Oral Cavity; Part VI, Miscellaneous.

The Principles and Practice of Dermatology.—Designed for Students and Practitioners. By William Allen Pusey, A. M., M. D., Professor of Dermatology in the University of Illinois, Emeritus; Past President of the American Dermatological Association; Past President of the American Medical Association. With fourteen colored plates, fifty-four plates in text, and four hundred and sixty-six text illustrations. Fourth Edition. Published by D. Appleton and Company, New York.

Dermatology is always on the move. Dr. Pusey's work reflects the present dermatological knowledge. A subject of particular interest to the profession is his able description of fungus infections, syphilis and carcinoma of the skin.

Gynecology for Nurses.—By Harry Sturgeon Crossen, M. D., F. A. C. S., Professor of Clinical Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary. With 365 engravings, including one color plate. Published by The C. V. Mosby Company, St. Louis, 1927. Price, \$2.75.

This book is one of the most practical and outstanding books pertaining to elementary gynecology that has ever reached this office. After presenting a brief survey of pelvic anatomy and physiology of gynecologic diseases, Dr. Crossen gives the details of gynecologic nursing in such a way as to be of real help to the physician and to nurse supervisors in training their student nurses.

Physical Diagnosis.—By W. D. Rose, M. D., Associate Professor of Medicine in the University of Arkansas, Little Rock, Arkansas. Fifth Edition. Three Hundred Ten Illustrations and Three Color Plates. Published by The C. V. Mosby Company, St. Louis, 1927. Price, \$10.00.

The profession of Arkansas can well be proud of the author of this book. He presents one of the leading works published on the subject of Physical Diagnosis. Dr. Rose's untimely death occurred shortly after this volume was off the press. We have been informed that this book is universally recognized as a standard text book. He graciously dedicated it to his wife.

In the revision of this volume for the fifth edition, further consideration has been given to the pathologic physiology of heart disease. In his preface he says that the manifestations of incipient cardiac insufficiency have stressed and emphasizes the clinical significance, and the limitations of the signs which are in evidence. Recent advances in the technique of physical examination have been incorporated. The book is illustrated.

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in these officers.

DIRECTORY

OF THE COUNTY SOCIETIES OF THE ARKANSAS MEDICAL SOCIETY

1929

COUNTY	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
ARKANSAS	M. C. John	Stuttgart	J. E. Neighbors	Stuttgart
ASHLEY	L. C. Barnes	Hamburg	J. W. Simpson	Hamburg
BAXTER	Scott Appleby	Cotter	J. J. Morrow	Cotter
BENTON	J. L. Clemmer	Gentry	C. S. Wilson	Siloam Springs
BOONE	G. I. Jackson	Harrison	J. H. Fowler	Harrison
BRADLEY	C. N. Martin	Warren	M. T. Crow	Warren
CALHOUN	C. T. Black	Thornton	T. E. Rhine	Thornton
CARROLL	J. H. Bohannon	Berryville	R. H. Huntington	Eureka Springs
CHICOT	Wm. A. Craig	Eudora	W. D. Easterling	Lake Village
CLARK	E. E. Carter	Gurdon	J. S. Moore	Arkadelphia
CLAY	N. J. Latimer	Corning	M. C. Richardson	Datto
CLEBURNE	J. T. Mathews	Heber Springs	H. J. Hall	Higden
CLEVELAND	A. J. Hamilton	Rison	H. O. Wilson	Rison
COLUMBIA	T. H. Jones	Magnolia	H. K. Carrington	Magnolia
CONWAY	Jno. H. Colay	Cleveland	W. H. Bruce	Morrilton
CRAIGHEAD	R. H. Willett	Jonesboro	Thad Cothorn	Jonesboro
CRAWFORD	J. A. Wigley	Mulberry	J. M. Stewart	Van Buren
CRITTENDEN	T. S. Hare	Crawfordsville	L. C. McVay	Marion
CROSS				
DALLAS	W. P. Ward	Fordyce	J. E. M. Taylor	Sparkman
DESHA	H. T. Smith	McGehee	W. B. Grayson	McGehee
DREW	M. Y. Pope	Monticello	E. R. Cotham	Monticello
FAULKNER	Marcus T. Smith	Conway	J. S. Westerfield	Conway
FRANKLIN	A. J. Hansberry	Ozark	Thos. Douglass	Ozark
GARLAND	H. King Wade	Hot Springs	G. A. Hebert	Hot Springs
GRANT	Robt. L. Paxton	Thiel	Irvin Sheppard	Sheridan
GREENE	F. M. Scott	Paragould	Wm. M. Majors	Paragould
HEMPSTEAD	Don Smith	Hope	Thos. Lee McDonald	Hope
HOT SPRING	E. T. Bramlitt	Malvern	W. G. Hodges	Malvern
HOWARD-PIKE	J. L. Roberts	Nashville	Wm. R. Lee	Mineral Springs
INDEPENDENCE	Chas. G. Hinkle	Batesville	V. S. Craig	Batesville
JACKSON	O. A. Jamison	Tuckerman	K. K. Kimberlin	Tuckerman
JEFFERSON	O. C. Hankinson	Pine Bluff	J. C. Beard	Pine Bluff
JOHNSON	S. M. Graves	Hagarville	E. H. Hunt	Clarksville
LAFAYETTE	F. E. Baker	Stamps	F. W. Youmans	Lewisville
LAWRENCE	W. W. Hatcher	Imboden	J. H. Stidham	Walnut Ridge
LEE	A. L. Wilsford	Moro	W. B. Bean	Marianna
LINCOLN	J. M. McClendon	Gould	Chas. W. Dixon	Gould
LITTLE RIVER	J. W. Ringgold	Ashdown	W. E. Vaughan	Richmond
LOGAN				
LONOKE	E. H. Harris	Coy	O. D. Ware	England
MADISON	W. E. Acree	Huntsville	Fred Youngblood	Huntsville
MARION				
MILLER	J. T. Robison	Texarkana	Herman Castile	Texarkana
MISSISSIPPI	F. L. Husbands	Blytheville	F. D. Smith	Blytheville
MONROE	C. H. McKnight	Brinkley	A. J. Dunklin	Clarendon
MONTGOMERY	W. D. Freeman	Mount Ida	J. H. McLean	Caddo Gap
NEVADA	O. G. Hirst	Prescott	A. B. Dickey	Prescott
OUACHITA	J. S. Rinehart	Camden	R. B. Robins	Camden
PERRY				
PHILLIPS	G. W. Eubanks	Wabash	M. Fink	Helena
POINSETT				
POLK	J. G. Hilton	Mena	F. C. Mullins	Hatfield
POPE	A. B. Tate	Russellville	Wm. P. Scarlett	Russellville
PRAIRIE	W. H. Crockett	Biscoe	T. G. Porter	Hazen
PULASKI	Homer Scott	Little Rock	Ernest Harl White	Little Rock
RANDOLPH	W. E. Hughes	Pocahntas	J. W. Brown	Pocahontas
SALINE	Dewell Gann, Sr.	Benton	T. E. Buffington	Benton
SCOTT	C. Bevil	Waldron	F. R. Duncan	Waldron
SEARCY	Jno. C. Pate	Big Flat	Sam. G. Daniel	Marshall
SEBASTIAN	D. W. Goldstein	Fort Smith	Pierre Rodman	Fort Smith
SEVIER	B. E. Hendrix	Gillham	J. C. Graves	Lockesburg
ST. FRANCIS	P. P. Boggan	Forrest City	J. O. Rush	Forrest City
UNION	M. V. Russell	El Dorado	Gordon Hastings	El Dorado
WASHINGTON	W. H. Mock	Prairie Grove	P. L. Hathcock	Fayetteville
WHITE	Dewey W. Sloan	Beebe	F. P. Hardy	Center Hill
WOODRUFF	M. A. Porter	Hunter	L. E. Biles	Augusta
YELL	H. L. Montgomery	Gravelly	C. B. Linzy	Plainview

THE JOURNAL

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Original Articles

SYPHILIS OF THE CENTRAL NERVOUS SYSTEM IN INFANCY AND CHILDHOOD*

I. A. ABT, M. D., Chicago

It seems evident from recent investigations that involvement of the central nervous system in hereditary syphilis is of more frequent occurrence than was formerly thought. When one reflects that in congenital syphilis the entire organism is invaded by the treponema, one is forced to believe that the central nervous system is open to the same attack as other organs or tissues. On the other hand, it must be assumed that some parts of the body may resist infection more than others, or that a reaction may occur in a certain organ without the production of serious results. Or, again, the infection may occur early, remain latent and manifest itself actively later in life.

In order to show the frequency of lesions of the central nervous system, it will be necessary to quote data from various clinicians, who have had opportunity of observing a large number of cases and following them for a period of time. Thus Hochsinger, in 1911, reports that out of 208 infants suffering from congenital syphilis, whom he observed for longer than four years, 84 or 43 per cent, developed nervous system complications. Rumpf, another observer, found a smaller number who showed neuro-syphilis; 13 per cent of his patients showed this complication. Kraeplin, the distinguished psychiatrist, believed that at least one-third of all severe forms of idiocy were of luetic origin. Stokes, commenting on neuro-syphilis in late hereditary lues, analyzed 150 patients, completely

examined with reference to the nervous system. Of these, 20 per cent showed abnormal spinal fluid (presumably with positive Wassermanns or increased cell count or the presence of globulin); furthermore, 26 per cent of the 150 patients showed, upon clinical examination, some form of neuro-syphilis. Jeans found that the nervous system was involved in 40 per cent of syphilitic infants, 31 per cent of older children showing active infection, and 20 per cent of older children showing latent infection. The group which he studied consisted of 214 infants and children. The nervous system was involved in 70 patients; that is, in 32.7 per cent. Among those whose spinal fluids showed positive Wassermanns, slightly more than one-third of the infants and slightly more than two-thirds of the older children had clinical manifestations of neuro-syphilis at the time of observation.

SPINAL FLUID

All writers are agreed that if the cerebrospinal fluid gives a positive Wassermann reaction one may consider that there is an involvement of the central nervous system. An increase in the cell count, the presence of globulin or albumen, or a positive colloidal gold reaction, though important, are not of the same significance as a positive spinal fluid Wassermann.

In this connection it may be interesting to refer briefly to the blood-Wassermann reaction in the new-born infant. At birth the syphilitic infant may have a negative blood Wassermann or it may be weakly positive or it may be strongly positive. After the first few weeks or months, all syphilitic infants show strongly positive blood Wassermann reactions. In late hereditary syphilis the Wassermann is positive in about 66 per cent of all the cases. In this form of lues it is positive, approximately 88 per cent during the first decade of life; 63 per cent in the second decade;

*Read at the 54th Annual Meeting of the Arkansas Medical Society, held at Hot Springs, May 2, 1929.

46 per cent in the third and 15 per cent in the fourth. After 20 years of age more than half the cases of late congenital syphilis are identified through clinical signs.

Jeans had the opportunity to examine 214 luetic infants and children. An examination of the spinal fluid indicated that the nervous system was involved in about 70, or 32.7 per cent.

Spirochetes have been found in the cerebro-spinal fluid in very young infants and they have been frequently found in the brain and spinal cord tissue. Hoelsinger has maintained that the lumbar puncture fluid of syphilitic children that contains syphilitic antigen and shows a positive Wassermann reaction, is generally free from spirochetes.

Congenital syphilis may attack any portion of the central nervous system. The morbid processes resulting from this infection may be present already in the fetus. They may be observed during infancy or in later childhood or the neurologic lesions may be deferred until the adolescent period.

Hereditary syphilis may produce a variety of changes in the nervous system. In a general way the following main groups may be considered:

1. *Syphilitic endarteritis*; first described by Heubner, occurs more commonly in the basal vessels of the brain, though the finer cerebral and cord arteries are not immune to this process. The vessels appear thickened, the lumen is diminished by proliferation of the intima and the peri-vascular coat shows an increase in the connective tissue element. The lumen of some of the larger vessels may be completely obliterated.

2. *Meningeal Involvement* is characteristic and relatively of frequent occurrence. The meningitis may be diffuse or localized. Hemorrhagic infiltration may occur diffusely or may be confined to the base of the brain. The spinal cord may be similarly affected; or there may be a gummatus infiltration with thickening of the meninges. This process is frequently found to involve the pia-mater and occurs in both brain and cord. The ependyma of the ventricle and the covering of the choroid plexus may be the seat of a chronic granulating inflammation. The involvement of these structures may explain the not infrequent occurrence of hydrocephalus.

3. *Encephalitis* and *encephalomalacia* may occur in the cerebral cortex or in the cord,

either as the result of endarteritis or of the meningeal inflammation. In the latter case the inflammatory process may extend to the brain or cord substances producing adhesions of meninges to underlying structures and degenerative processes may occur in nerve fibers and cells.

4. *Isolated gummata* may occur in the central nervous system, but are not frequently observed. On the other hand, gummatus infiltration of the meninges as well as of nerve cells and fibers is not of rare occurrence.

5. *Local and Diffuse Sclerosis* of the central nervous system may develop. This condition causes the diseased portion of the brain to become firm in consistency; the convolutions shrink, and atrophy, and may lead to the most varied symptoms, among which may be mentioned cerebral diplegia, amaurosis without ophthalmoscopic findings, spastic hemiplegia, pseudo-bulbar paralysis, and diffuse sclerosis of the brain. If the hypophysis is involved, dystrophia adiposo-genitalis or diabetes insipidus may occur. Spinal cord lesions may occur in a similar way, though as a rule they are associated with cerebral processes.

6. *Apoplectic cerebral hemorrhage* is rare in later childhood, but the new-born is more susceptible.

Frequently we find combinations of meningeal brain and cord pathology which explains the multiplicity of clinical manifestations.

Peripheral nerves are rarely affected by congenital syphilis. While in most respects the neuro-syphilis of the acquired type of the disease is not dissimilar to that of the congenital type; nevertheless, it is characteristic for the latter that multiple parts of the nervous system are more frequently involved.

Possibly the reason that we do not see more neuro-syphilis in childhood, particularly tabes and paresis, is because so few of the severely affected infants survive the early period of life.

CLINICAL MANIFESTATIONS

Hydrocephalus is a comparatively frequent symptom and is observed during the first year of life. In many instances the only symptom is an enlargement of the circumference of the skull, protrusion of the fontanel and diastasis of the sutures. In the majority of cases it is observed between the third and the eleventh

month, though it may be present during fetal life. As a rule the intelligence is diminished, though there may be other nervous symptoms present such as restlessness, insomnia, vomiting, rigidity of the neck, convulsions, and nystagmus. If the condition progresses, rigidity or spasticity may develop and mental deterioration ensue. The size of the luetic hydrocephalic head is never as large as in the congenital form on a non-luetic hydrocephalus. It should not be forgotten that there are a great many cases of hydrocephalus due to other causes than syphilis and in every case a careful history should be obtained with a detailed clinical examination, as well as a chemical and microscopic examination of the spinal fluid. Once the diagnosis of syphilitic hydrocephalus is made we may await certain variations in the course of the illness. The process may terminate suddenly in death, or the course may be protracted for months terminating ultimately in death. Though, on the other hand, not a few of these patients may be cured, and in some instances the process is arrested by anti-syphilitic treatment. In some cases after apparent cure, a recurrence of the hydrocephalus occurs, or other symptoms of brain syphilis develop after a shorter or longer interval. In other patients general convulsions and imbecility cause a prolonged period of ill health and retarded physical and mental growth.

MENINGITIS

Congenital syphilis may produce symptoms of acute or chronic meningitis. Though syphilitic meningitis of the acute form is rare in the congenital lues of children, it may occur in the secondary stage of acquired syphilis. As a rule the meninges are thickened and there is an associated encephalitis or the meninges may be studded with small gummata which are found usually at the base of the brain. The same process may occasionally occur on the convexity, especially in the motor area. This latter lesion may be associated with Jacksonian convulsions and paralysis, which eventually assumes the character of a hemiplegia. Minute gummata with slight diffuse infiltration of the meninges may be seen on autopsy; or there may be larger gummata at the base, though as a matter of fact in young infants large gummata are not so frequently observed. On the other hand there may be diffuse nodular gummatous encephalo-

myelitis that terminates in sclerosis in young infants. Pachymeningitis hemorrhagica interna has been reported by a number of observers. Virchow observed hemorrhages between the pia, the brain cortex and in the ventricle. In the basilar form or gummatous meningitis the region of the chiasma, the inter-peduncular spaces and cranial nerves and meninges of the posterior fossa may be involved, with symptoms peculiar to each region. It may be necessary to differentiate syphilitic gummatous meningitis from tuberculous meningitis. This must be done by obtaining a careful history, blood and spinal Wassermann test and the examination of the spinal fluid for lymphocytosis, tubercle bacilli as well as a Wassermann reaction. In infants and young children syphilitic meningitis has the features of a chronic meningitis and presents a clinical course which is quite distinct from the meningeal involvement of older children. In the latter group syphilitic meningitis and juvenile general paralysis of the insane are practically identical clinical types.

In the infantile type it is noticed that the little patient does not hold up his head at the usual time, nor does he take notice of his surroundings. The arms and legs may be spastic in type and motion is limited. Perhaps the infant has been retarded physically and mentally for some time. In many of these cases, syphilitic manifestations of one kind or another are observed before the onset of the acute symptoms.

The presence of choroiditis or a positive spinal fluid or blood Wassermann confirm the diagnosis. Once a syphilitic meningitis has established itself, ultimate recovery can scarcely be expected to occur.

JUVENILE TABES

Juvenile tabes is not frequent. Fairbanks has no hesitation in saying that tabes is rarer than any other luetic disease of the nervous system in childhood.

It is generally reported that this disease manifests itself by symptoms similar to those which occur in adults. It may be observed as early as the 6th or 7th year, though its course is generally protracted and total incapacity may not occur until after the twentieth year. In contra-distinction to what occurs in adults, ataxia may be absent or develop late. Patellar reflexes may be present for a long time. Late in the disease they may also disappear. Fix-

ation of the pupils, or bladder disturbances, may be the solitary symptoms for a long period before the complete symptom complex has developed.

There may be areas of anesthesia on the skin, atrophy of the optic nerve, unequal pupils and failure to react to light, and lancinating pains during the early stages of the disease.

The symptoms are frequently not so pronounced as in the adult form of the disease and for this reason the signs are more readily overlooked.

The pupils are frequently immobile, large and irregular in contrast to the miosis of the adult type.

A variety of ocular symptoms occur in juvenile tabes and they are frequently of great importance in the diagnosis of the disease, as well as in the interpretation of other obscure symptoms, such as incontinence of urine, lightning pains and gastric crises. Optic atrophy is reported to occur in 40 to 45 per cent of the cases. While usually primary the atrophy may occur in the course of a choroidoretinitis. In addition transitory diplopia and ocular palsy may occur late in the disease.

Gastric crises have been observed even in patients with negative spinal-fluid Wassermann. It is possible to think that this condition might be confused with cyclic vomiting. Stokes reports that he has seen a case of Charcot spine in a juvenile tabetic. *Headache* occurs commonly in the early stage of the disease. This symptom is common in many other conditions. Mental disturbances of juvenile tabes are not observed as a rule during childhood. If they do occur their existence probably depends on a co-existing general paresis.

Tabes in adults requires 15 or 20 years to elapse between the initial lesion and the onset of tabetic symptoms. Consequently, it is not surprising that congenital syphilis should cause posterior sclerosis to appear at the end of childhood. Patients with juvenile tabes are found most frequently in the institutions for feeble-minded.

JUVENILE PARESIS

The outstanding clinical feature of juvenile paralysis is progressive dementia. There is a combination of symptoms consisting of apathy, failing memory, mental deterioration,

changes in temperament and emotional disturbance.

Not frequently attention is first called to these children by their failure in school work. They show a lack of interest in their studies, are unable to keep up with their classes and have emotional outbursts, both at home and at school. In some instances they wander from home; they frequently become taciturn, inactive, inattentive and irascible and lose their affection for family and friends. There is a loss of childhood interest. The children become asocial.

Most cases of juvenile paresis are noted at about the age of puberty, though a study of the reports shows that they may occur from the 4th to the 21st year. Both Oppenheim and Nonne report general paresis occurring as late as the 40th year, due to congenital syphilis. The patients are inferior from infancy, both physically and mentally.

SOMATIC SYMPTOMS OF JUVENILE PARESIS

Sometimes the early symptoms of the disease may be expressed in a physical way such as convulsions or defective gait, such as stumbling ataxia, or by general inco-ordination of movement. In this latter category, belong tremors of the hands, tongue, lips and face, also choreiform movements and movements of the mouth and tongue as in chewing and sucking. The condition of the pupils varies in juvenile paresis. While they may be normal in some instances, as a rule some abnormality is observed. They may be variable in size, although irregularity should suggest the possibility of paresis. The Argyll-Robertson pupil may be present, though it should be remembered that tabes and paresis frequently occur in combination constituting the tabo-paretic group. Optic atrophy is frequently present in this disease combination. The course of juvenile paresis is slightly longer than it is in adults and, as a rule, the juvenile type runs its course in from 3 to 9 years. The prognosis in juvenile paresis is bad. Remissions are practically unknown.

Transitory paralysis of the arms or legs may be observed early in the disease. The speech is defective in about half the cases. It may be stuttering, hesitating or characterized by faulty articulation. As the disease progresses it is frequently observed that the children tend to become obese, though finally,

as the disease approaches the end, the children waste and become emaciated.

IDIOCY AND IMBECILITY

Since the introduction of the spinal-fluid Wassermann test it has been found that congenital syphilis plays a considerable role in the causation of mental deficiency. Mental defectiveness and deficiency are common in syphilitic children. A considerable number of syphilitic children show mental defectiveness, mild and severe imbecility and even idiocy. It will be observed from the study of Weiss and Izgur, that 3 per cent of their mentally defective children were syphilitics.

Ahman states that on the basis of examination of 100 congenital syphilitics, that approximately one-half will show mental defects ranging from backwardness to idiocy. Solomon employed the Wassermann test in 4,400 cases of feeble-minded children. His results showed that the reaction was positive in about 6 per cent. This result shows a somewhat greater incidence of syphilis among the feeble-minded than among the general population; but the difference in figures is not sufficiently great to permit us to assume that syphilis is the all-important factor in the production of feeble-mindedness, excluding, of course, the mental deficiency which occurs in juvenile paresis. It is recognized, however, that mental retardation is observed frequently in congenital syphilis, though the mental condition improves in proportion to the success of treatment.

In addition to other causes, one must not be unmindful of physical defects, such as defective vision, impaired hearing and general debility and illness causing absence from school. It is also maintained that syphilitic children tend to show behavior disorders, such as disobedience, delinquency, difficulty in management. Precocity is also considered by some as a symptom of congenital lues, and others classify general nervousness among children as one of the symptoms of congenital syphilis. Nervousness occurs in such a large proportion of children that its association with syphilis should be regarded as a mere coincidence.

EPILEPSY

Epilepsy may be caused by congenital syphilis. Various European writers have estimated that 5 to 7 per cent of epilepsy in childhood is on a syphilitic basis. The attacks may

be Jacksonian in character and may be caused by luetic meningitis or a meningo-encephalitis. Convulsions may also occur as secondary symptoms of more or less diffuse syphilitic processes. It has already been pointed out that convulsions occur in general paresis and that in this disease the patient may die during an epileptic seizure. Epilepsy of congenital syphilitic origin is frequently accompanied by other cerebral symptoms such as disturbances of speech and tremors, though uncomplicated cases of essential epilepsy have been reported by numerous writers. Notwithstanding this latter statement, recent statistics fail to corroborate the frequently quoted statement that essential epilepsy is very often caused by syphilis.

The older writers on late hereditary syphilis pointed out the frequent relationship between this form of the disease and nerve deafness. Defective hearing may also occur early in the disease.

Polyuria and Frohlich's type of adiposogenitalis may be due to syphilitic disease of the hypophysis. The spirochetes may affect this gland by direct invasion, producing interstitial changes, or gummata may be deposited in the gland. On the other hand, basal meningitis or pressure atrophy produced by extensive hydrocephalus may cause atrophy and dysfunction of the hypophyseal gland.

DIAGNOSIS OF CENTRAL NERVOUS SYSTEM LUES

In every case of suspected congenital lues, a careful history should be obtained and a thoroughgoing physical examination instituted. The patient's history should be carefully investigated and early signs of congenital syphilis such as snuffles, eruptions, bone and visceral changes should be noted. The child's intelligence level should be determined if possible, and a neurological examination should be made with special attention to the irregularity or inequality, as well as the reaction of the pupils. Visual acuity should be tested and an ophthalmoscopic examination should be made to detect the presence or absence of optic atrophy. The presence of ptosis and ocular muscle paralysis are important factors. Facial paralysis, tremors and reflexes should also be investigated. The Wassermann examination of the spinal fluid is a determining factor. An increased cell count, positive globulin tests, and a characteristic

colloidal gold curve, with a positive Wassermann reaction will clinch the diagnosis.

THERAPY

The most important factor in the treatment of congenital lues is obviously prophylactic treatment of the parents. Both father and mother should be treated before conception and during pregnancy the mother should be treated continuously.

After the birth of a child born of luetic parents, treatment should be instituted for prophylactic reasons. If the child is born with manifest syphilitic lesions, the treatment should be vigorously pursued. It seems superfluous to go into detail concerning the routine methods of treatment employed. Mercurials and the arsenicals are usually the drugs of choice. The plan suggested by Erich Muller, which consists of twelve to fourteen weeks treatment by alternating injections of calomel or some other mercurial with two weeks of salvarsan injections. In place of neo-salvarsan the sulph-arsphenamine or my-salvarsan may be employed intramuscularly. More recently the stovarsol, manufactured in France, or its equivalent, spirocid in Germany, have been used internally. Neo-salvarsan 0.03 gm. per kilo in the first 2 years of life; from the 3rd to the 5th years .02 gm. per kilo. After that 0.01 gm. per kilo may be administered. Spirocid or stovarsol is administered in an initial dose of 0.03 gm., in young infants 0.12 gm.; in older children 0.25 gm. by mouth. It is directed to give spirocid once daily in the morning on an empty stomach. In some clinics the spirocid is given daily for one week, followed by a week's pause. Mercury or bismuth may be substituted in the interim.

Following the plan of Wagner-Jauregg in adult neurosyphilis, the malaria treatment has been tried in syphilis of the nervous system in children.

Three to five cc. of blood containing the active tertian type of parasite is injected subcutaneously, intramuscularly or intra-venously and in 9 to 14 days (4 to 8 days after intravenous injection) the child has active malarial paroxysms with considerable elevation of temperature (103 to 15 degrees). After the occurrence of 8 or 10 malarial attacks, quinine is given (1.5 to 3 grains once daily). If diarrhea or vomiting occurs the quinine treatment may be tried earlier. If the quotidian type of fever occurs the tertiary course

may be produced by appropriate dosage of quinine.

Wagner-Jauregg thinks that the tertian type is more readily produced if the malarial blood is injected intra-cutaneously in several small doses. The spleen is nearly always enlarged during the malarial period. If the patient becomes anemic, or the plasmodia swarm excessively in the blood, the course may be terminated by quinine. If the patient shows an idiosyncrasy against quinine or if the malaria persists and is refractory to quinine treatment, neo-salvarsan may be employed to counteract the malaria. Italian writers have suggested that stovarsol or spirocid will also counteract malarial paroxysms.

After the malarial treatment, when the resulting fever has subsided, mercury, bismuth or salvarsan should be employed.

The malarial treatment of congenital lues is indicated in the diseases of the central nervous system. Kundratitz reports an eight year old child suffering from optic atrophy, fixed pupils, psychic disturbance and positive blood and spinal fluid, who had been refractory to the usual methods of treatment, and who showed marked improvement after one course of malaria treatment followed by two courses of neo-salvarsan. Other authors have observed improvement in disturbances of gait spastic paraplegia, and imbecility.

In children who show an obstinate positive spinal fluid Wassermann without clinical symptoms, the malarial treatment is especially indicated.

The malarial treatment should not be employed in young patients suffering from heart disease, non-syphilitic nephritis, active tuberculosis and severe anemia. Children giving a positive Pirquet reaction without active tuberculosis may be given this treatment.

In refractory cases the malarial treatment may be tried again after a year or a year and a half. In some instances a second malarial infection will not occur. It is also known that blood and spinal fluid do not become negative at once, sometimes several months or even a year may elapse before the malarial treatment followed by specific chemotherapy will produce a favorable result.

Children seem to withstand malarial treatment more favorably than adults. The youngest child treated with malaria was six months old. Kundratitz reports his results on twen-

ty-five children, and is quite optimistic about the effects of malarial therapy in neuro-syphilis of childhood.

SUMMARY

1. From 20 to 30 per cent of children suffering from congenital syphilis, show involvement of the nervous system.

2. A positive spinal fluid Wassermann is the most significant reaction to indicate the presence of neuro-syphilis.

3. The blood Wassermann may be negative in newly-born infants. After the first few weeks or months, nearly all syphilitic infants show positive blood Wassermann reaction.

4. The principal lesions of neuro-syphilis in infancy and childhood are:

A. Syphilitic endarteritis.

B. Meningitis.

C. Hydrocephalus.

D. Encephalitis.

E. Isolated gummata.

F. Local and diffuse sclerosis.

7. Cerebral and meningeal hemorrhage.

5. Combined brain, meningeal and cord lesions are frequent in congenital lues.

6. Peripheral nerves are rarely involved.

7. Hydrocephalus may be of syphilitic origin, though there are numerous cases of hydrocephalus due to other causes.

8. Meningitis of luetic origin is usually chronic in its course, frequently associated with encephalitis. The meninges are usually studded with small gummata, and show diffuse infiltration. Pachymeningitis Hemorrhagica interna sometimes is of luetic origin.

9. Juvenile tabes, resembles in most respects the same disease in adults. Patellar reflexes may be present for a long time, and disappear late in the disease. Fixation of the pupils or bladder disturbances may be the solitary symptoms and be present a long time before the disease has completely developed.

10. *Juvenile paresis*: The outstanding symptom is progressive dementia. Most cases noted at about the age of puberty, though they have been observed from the fourth to the twenty-first year. Early symptoms may also consist of convulsions, defective gait, tremors and choreiform movements. The condition of the pupils varies. Juvenile tabes and paresis may occur in combinations.

11. *Mental retardation*: Mental deficiency is caused by syphilis in a relatively small proportion of cases.

12. *Epilepsy*, may be due to congenital syphilis. It is estimated that 5 per cent of epilepsy in childhood is on a syphilitic basis.

13. *Deafness*, may be an early or late manifestation of congenital lues.

14. *Polyuria*, and Frohlich's type of adipo-genitalis may be due to syphilitic disease of the hypophysis.

15. The diagnosis is made by obtaining a careful history and thorough physical examination. The Wassermann examination of the spinal-fluid is the determining factor.

16. The treatment consists of prophylactic measures in the parents. The anti-syphilitic treatment of the new-born baby, as well as of the older neuro-syphilitic child, should be carried on vigorously along accepted lines. The malarial treatment of manifest neuro-syphilis, juvenile paresis and cerebral syphilis, is being carried on in a number of clinics on the same general plan that has been recommended for adults by Wagner-Jauregg and his pupils.

RHEUMATIC ARTHRITIS*

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A man must have a good deal of nerve to come from Kansas City to Hot Springs to talk about Arthritis. It certainly seems like "carrying coals to Newcastle," to bring this subject to your attention in this place, famous all over the country as a resort for rheumatics and to stand here in the presence of physicians who have had such a large experience in the treatment of arthritis. I am comforted by the realization that these men, better than any others, know that the last word has not been spoken on this world old disease, nor will it be for a long time. Some hopeful progress has been made recently. My desire is to call attention again to a simple classification, to present the problem in plain words, to record some of the recent observations, notably those of Dr. J. C. Small of the University of Pennsylvania, and to attempt to suggest the lines along which we must direct our

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thought and our therapeutic measures to achieve an increasing success in the control of these cases.

Joint diseases of the rheumatic type have been known since the earliest days.

The favorite treatment was the application of heat; hot water, steam, hot mud. This persists to the present day, with the addition of heat derived from lights. It relieves many and cures some. Parts of the equipment used by the Romans at Bath, England, for the treatment of arthritis by steam baths are still in use there.

At an international conference of distinguished authorities to discuss arthritis which was held at Bath recently, all agreed on the importance of the problem, all agreed that many children suffered permanent heart damage from rheumatic infection, all agreed that the economic loss caused by the prevalence of arthritis in adults was appalling. They agreed on nothing else as to the etiology or treatment. They were more nearly agreed on the value of the sanitarium treatment as used at Bath than on any other subject.

The second great therapeutic advance was the use of salicylates. There can be no doubt of their value in some cases. Yet all of us have seen many patients who have taken a barrel of salicylates and yet their arthritis continued calmly to progress.

The third and most helpful discovery was the relation of local foci of infection to rheumatic arthritis. This excited the greatest enthusiasm because it explained the etiology as well as offering a rational therapeutic attack. Brilliant results were achieved at once in a number of cases. They are still achieved at times by all of you.

However there is still a world of people suffering from rheumatic arthritis. They come into your offices, sans teeth, sans tonsils, sans other organs, shot to pieces with vaccines and strong medicines; but still hobbling along on their rheumatic joints. Others you see chair-ridden or bedridden. *The arthritis problem still remains one of the most difficult with which our profession must struggle.*

Putting all kinds of rheumatic or rheumatoid arthritis together they may be divided pathologically into two groups: proliferative and degenerative, from the tissue changes.

The proliferative group presents the changes characteristic of inflammation and presents the usual gradations. There may

be merely acute congestion and increase of synovial fluid. There is more often round celled infiltration and fixed tissue cell proliferation, with much or little increase of free fluid. This may resolve completely or may leave permanent synovial thickening or fibrosis with capsular and periarticular thickening and perhaps contracture and with some limitation of the range of motion. The process may go on to pannus formation, with partial or complete destruction of joint cartilage and slight changes in the adjacent bone and result in marked limitation of motion or fibrous or bony ankylosis.

The degenerative type is characterized by a degeneration and slow destruction of the cartilage on the main bearing surfaces of the joint, and increased activity of the perichondrium at the periphery of the joint with the formation of rims or spurs of new bone. There seems at times to be an aseptic necrosis of bone behind the cartilage in the ends of the long bones. Some authorities hold that this bone change precedes the degeneration of cartilage.

On superficial thought the names, proliferative and degenerative, are very confusing. The proliferative changes which give the name are almost all in the soft parts.

The type which shows bone proliferation, that is, rims and spurs and vertebral bridging; in short, proliferation from an x-rays viewpoint, is called degenerative, because that is the primary histological process and the marginal growth of new bone is secondary.

Clinically I still find it convenient to divide them as follows: under proliferative, we have three divisions:

- (1) Acute rheumatic fever,
- (2) Simple infectious arthritis,
- (3) Atrophic arthritis.

Under degenerative we have hypertrophic arthritis.

Acute rheumatic fever might be called simple infectious also. The distinction is that it is probably due to a specific micro-organism, just as we have meningitis due to a number of different micro-organisms, but only one specific epidemic meningitis.

In acute rheumatic fever, the specific organism may enter the system through a mucus membrane not grossly damaged or diseased. The patient catches it as they might measles or scarlet fever. Diseased tonsils may

be a convenient portal of entry, but a local focus is not essential.

Small, of the University of Pennsylvania, has apparently isolated the organism, which he calls the streptococcus cardio-arthritis. His preliminary report appeared about two years ago.

There are three striking features of acute rheumatic fever. It usually affects the heart and more than half the cases have permanent endocardial change. The nervous system may be affected more than the joints, resulting in severe chorea. In the majority of cases the joints undergo complete resolution after an acute inflammation of weeks rather than months, and those which have relapses usually recover completely and in only a small proportion of the cases is there permanent residual joint damage.

Small divides rheumatic fever pathologically into simple exudative and proliferative. The exudative had mostly fluid exudate and few tissue changes. He thinks this form is markedly benefited by salicylates and that the proliferative is not affected by them.

In his last article in the January, 1929 number of the *Annals of Internal Medicine*, Small describes the typical throat of acute rheumatic fever as an intense redness of the anterior pharyngeal pillars, uniting in an inverted crescent at the uvula and sometimes spreading over the soft palate or involving the posterior pharyngeal wall. Cultures from this area are more likely to show the specific streptococcus than material expressed from the tonsils.

Small has prepared an equine and also a bovine serum. Its effect is best in the early acute stage of arthritis and gives prompt relief in many cases of chorea. He feels that the serum should be followed up by doses of vaccine or antigen, and that, in chronic cases, the latter are the only efficient remedy.

The second group of cases are designated, simple infectious arthritis. They constitute about half of all the cases of "joint rheumatism."

They may be acute, sub-acute or chronic. They are due to some local focus of infection. Most of the victims are in good health at the onset of the disease as far as physical and laboratory examination can discover. There may be factors of overwork or exposure or functional disturbance, which lower their

resistance at the particular time of the onset of the arthritis. Early discovery and removal or treatment of the local focus, often results in complete recovery.

The primary foci in young people are most often tonsils, nasal or pharyngeal infections and the intestinal tract. In older people, they are most often, teeth, tonsil stumps, sinuses, colon, rectum, genito-urinary tract, gall bladder.

There is a natural tendency in many cases to recovery or at least remission which is not dependent on therapeutic measures.

Acutely inflamed joints frequently recover entirely and examination and x-ray are negative. Even if the patient is not free from rheumatism the process may have shifted to other joints leaving no apparent damage to those first affected. Only after repeated attacks do permanent pathological changes take place in the joints.

There is a minority group in which the infection is very severe and results in early pannus formation and damage to the joint cartilage, or in an almost osteomyelitic infection of the cancellous bone close to the joint margins. These cases show early permanent damage, perhaps even ankylosis, of one or more joints, while the others pursue the usual course.

It would seem that in this group of simple infectious arthritis we ought to show a recovery, in most of the cases, and arrest practically all of them.

Why do we have so many failures or relapses?

First, the true primary focus may not have been discovered, or may have been inadequately treated.

Second, the recurrences may be allergic reactions. In recent years a number of different observers have noted the similarity of the sudden flare-ups of arthritis to allergic reactions. In many cases, the pathologist could find no micro-organism in tissues removed from the joint by biopsy, nor could he grow anything in his cultures. Sometimes we have been inclined to think it was because the bacteriologist was not sufficiently clever or persistent. In our more reasonable moments we have been content to say: the lesions of infectious arthritis are caused by the presence of the organisms in the joint tissues, or as a result of the irritation caused

by the presence of products of bacterial growth carried to the joint from some distant focus.

We did not explain just how these bacterial products acted. I talked to Dr. Small about this in Philadelphia a few weeks ago. He is strongly convinced that allergy is the explanation of many cases. The patient becomes sensitized to one of the protein products of a specific streptococcus. The local focus may then be removed, but a tiny persistence of infection in some neighboring location may incite new attacks of joint swelling. Most important of all, the allergic reaction is not caused merely by the original strain of streptococci; but is a response to a split proteid from any one of a number of strains of streptococci (can be boiled).

Thus any cold or sore throat, where some streptococci are active, or the absorption from any localized streptococcic area, however mild may cause a relapse of arthritis with involvement of many joints. The lesions appear and disappear like attacks of urticaria. Repeated attacks cause permanent damage.

Joseph A. Freiberg reported in the *Archives of Surgery* in February, 1929, a carefully conducted and checked series of experiments on rabbits in which proliferative arthritis was produced by the injection of a bacterial extract. Because he had noted in a number of children an acute gastro-intestinal disturbance had preceded arthritis and because in these cases diet and catharsis from mild drugs assisted by abdominal massage had affected cures, he chose the bacillus dysenteriae Flexner. The filtered bacterial extract was sterile. The first injection into the rabbit's knee produced only a transient reaction; but after the third injection there were permanent joint changes which were intensified by later injections and produced gross lesions with deformity, cartilage destruction and new bone formation. He also found after repeated sub-cutaneous injections a single injection into the joint would cause a moderate arthritis. Single injections of living organisms of dysentery into the joints of rabbits produced a prompt inflammatory reaction of moderate severity and considerable duration, but most of the joints completely resolved. One rabbit died of septicemia and one developed diarrhea. Dr. Freiberg's con-

clusion is that the joint was sensitized by the first injection and that the subsequent injections produced allergic reactions finally resulting in permanent joint damage.

Swift has gone so far as to say that a local focus of infection in arthritis is an area in which are developed bacterial extracts which are the cause of allergic reactions in joints.

I do not go so far as this. I know that in a fair number of cases organisms are recovered from the joint and that other cases have a clinical course not like an allergic manifestation. However, it looks as though allergy would prove to be the explanation of quite a number of cases. The problem with these will be one of desensitization by repeated small doses of antigen. As we know from our experience with other forms of allergy, this is often hard to manage.

The third cause of failure is, that the primary focus is removed too late and secondary foci have developed. These are most often granulomata in the jaw where teeth have been removed, or sinus, colon, gall-bladder or bronchiectatic cavities. In some instances, some more severely infected joint acts as a secondary focus.

The mere statement of the possible sites of infection shows how complicated the problem becomes in cases of infectious arthritis of years duration. We must be diligent and clever and patient medical detectives, if we are to track down the chronic offender.

Personally I have put much stress on the search for these secondary foci. The existence of an allergic group may diminish their importance. It seems probable, however, that they will be found to be the active cause of the persistence of many cases of arthritis, whether by the allergic route or otherwise, and that their discovery and removal will remain of great importance.

The longer a case of chronic infectious arthritis has lasted, the more important become the factors affecting the general health, such as nutritional disturbance, thyroid exhaustion and others. These are discussed under the next heading of atrophic arthritis, where they are considered of the greatest importance.

To sum up the group of simple infections arthritis; there is an original attack caused by a specific streptococcus in acute rheumatic fever, or by one of several strains of streptococci, or some other organisms, which have gathered force in some local focus of infection. The continuance may be due to one of four causes:

(1) Repeated doses of poison from the original focus.

(2) Sizable doses from some secondary focus.

(3) Allergic joint symptoms from very tiny doses of some bacterial product, either from a focus, or from some new superficial infection of a mucous membrane.

(4) From the actual presence and persistence of the organisms in some joint or joints, most often seen in monarticular arthritis.

The third group is atrophic arthritis. Here are found the most distressing cases of deforming, ankylosing polyarthritis. It most often occurs in children or young people, but is not infrequent in middle life.

Usually its subjects have always been delicate. They are of the slender viscerotropic type, generally poorly nourished. With the older patients they have some times a history of physical or emotional shock or a giving down under the stress of life.

The onset is usually slow. There is a soft insidious swelling of joints.

As the swelling subsides, the tissues contract, causing deformities and subluxations with a restriction of motion which often goes on to fine fibrous or bony ankylosis. The hands are frequently affected early. Besides the swellings and contractures there is a marked atrophy of the intrinsic muscles of the hand.

Many joints are progressively affected. Complete resolution never occurs. There is always some permanent joint change which can be detected by examination and x-ray. Bone atrophy is a striking feature in the x-ray even early in the disease. All too often the disease progresses until almost all of the joints of the limbs and spine are seriously or completely impaired. The atrophic changes suggest neurological lesions.

There is often enlargement of the lymph nodes.

This disease is due to the influence of bacteria or their toxin, plus X, Y and Z, more

or less unknown quantities. These X, Y, Z factors seem more important than the infection; or, to put it another way, without attention to them, it is impossible to control the infection.

In my experience atrophic arthritis is never cured merely by the removal of local foci. Often the patients are made worse by the shock of operations or severe local treatments.

The signs which point to those additional factors are, anemia, poor nutrition, poor circulation with cold sweating extremities and disturbed metabolism.

We might label the "X" group, faulty alimentation, perhaps colon toxemia, perhaps vitamin deficiency, especially of "B," perhaps some little understood disturbances of sulphur or phosphorus metabolism.

The "Y" group might be designated as some endocrine unbalance. Under this head we might carry disturbances in the local circulation. It is well known that the temperature in the affected limb may be many degrees below that of the body.

Some authorities hold that the disease begins as a muscle dystrophy and that it is caused by changes in the sympathetic or vegetative system of nerves due to endocrine deficiencies, and that the joint changes are essentially trophic.

The "Z" group may be designated as still an unknown quantity. Dr. Small has made an observation which may prove the means of supplying the answer to this unknown factor. He has noted in a few cases of atrophic arthritis, which he has studied, an amazing degree of sensitization; a marked allergic reaction being produced by 1-20th of the soluble extract of a single streptococcus.

Please do not misunderstand me. Dr. Small's work on acute rheumatic fever is well advanced and he is actively working now on the question of whether certain relapses in infectious arthritis may be an allergic manifestation. He is not, as yet, advancing any theory about atrophic arthritis. I am suggesting that this might prove to be an important lead in solving this complicated problem.

In medical literature are recorded many failures in the treatment of atrophic arthritis and here and there, isolated cases or small groups of cases which have been greatly improved. The striking thing is the widely different nature of the means used. With one,

it is the correction of ptosis and a special diet. With another, it is endocrine therapy. A third may have used a vaccine made from one of the patient's lymph nodes, while someone else has used oxygen subcutaneously. From the Mayo clinic are reported a few cases of polyarthritis of the atrophic type where the sympathetic ganglia in the lumbar region have been resected. It is said that the lower limbs become dry and warm and the arthritis was arrested while it progressed steadily in the upper extremities. I do not conclude that any of these procedures will prove a specific in atrophic arthritis, but only that the relative importance of these X, Y, Z factors varies in different cases.

Only by attention to every possible measure which may improve the patient's general health and build up his power of resistance to the infection, can we hope for success. The balance is strongly against us. As we shift one and another item toward the recovery side of the balance beam, we are prone to attach too much importance to the last weight shifted, which finally turned the scales in our favor, if we are so fortunate as to meet with success.

Under degenerative arthritis we have the clinical title of hypertrophic arthritis.

The hypertrophic type is a disease of middle and old age. It occurs earlier in those who have done hard manual labor or are prematurely old for other reasons. Most of the cases of the so-called menopause arthritis are of this type. It is characterized by a degeneration and slow destruction of the cartilage on the main bearing surfaces of the joint, with the formation of rims or spurs of new bone. There may be increase of joint fluid at times, and a few cases present a hypertrophy of the synovial membrane with deposits of chalk or cartilage which produce so-called loose bodies.

Ankylosis is almost unknown, even when the cartilage in the center of the bearing surfaces has been entirely destroyed and the eburnated bony surfaces are in direct contact. Motion is limited by the squaring up of the articular ends, by the bony excrescences and by the contractures of the capsule or tendons caused by the habitual assumption of a position of partial flexion to escape a painful point of contact.

It is doubtful if bacteria have any etiological relation to this type. The contention that they are due to amebae has not been confirmed. There is some reason to think that products absorbed from the colon aggravate the disease.

The predisposing cause, and perhaps the actual cause, is mechanical strain due to hard work, or faulty posture, or the undue strain put on the joints by obesity and flabby muscles in older people.

Metabolic changes seem more important than bacteria or their toxins. If the latter have a causal relation, it is probably indirect.

It is, therefore, not logical to expect any improvement in these cases from the removal of local foci, unless such foci are affecting the general health.

In my opinion many patients have been needlessly mutilated by extraction of teeth, or removal of tonsils, or operations on other organs. Such efforts will not cure this type of arthritis. The treatment would better be directed to a proper diet, the control of obesity, the elimination of colon stasis and the mechanical correction of faulty posture and the protection of affected joints. Thyroid is often of value.

These joints never undergo complete resolution. There are always some changes in the roentgenograms. The progress is usually slow and may be arrested spontaneously, or as a result of treatment. Often patients suffering great discomfort from sharp spurs are better off after a year or two, because the spurs have been built up and rounded into blunt mounds. The disease sometimes causes severe pain and disability in a hip, out of all proportion to its behavior in other joints.

Time will not allow me to go into details of treatment. Sometime within the year I hope to assemble and publish case reports on a series of patients with chronic arthritis.

Each case had a history carefully taken and received a thorough physical examination and all laboratory tests. It was then placed in one of the classes already mentioned. Of course, there are some border line or mixed types. The only common ones are "infectious" verging on "atrophic" and "infections in a person who also has some hypertrophic lesions like Huberdon's nodes."

If the case was labeled "infectious" most careful search was made for a focus. Beside those about the mouth and nose with which you are so familiar, a surprising number seemed to depend on absorption from colon stasis, or from quiet gall-bladders, which were causing no surgical symptoms; but which failed to visualize well under the x-ray, or, if they filled finally, were very slow to empty.

Most cervical erosions do not cause arthritis; but we have learned to recognize a certain boggy type of cervix, somewhat like hypertrophied tonsils, which we find is a focus. Medical treatment of gall-bladder and colon is always tried before surgery is considered.

None of these patients received salicylate except a few intravenous injections just before and after operation on some local focus. This seems to lessen the danger of a flare up from stirring up the focus.

The most serviceable drugs have been ammonium, iodoxy, benzoic acid intravenously. Where the local focus cannot be entirely relieved, or there is a lingering infection at some unknown site, these drugs have been very effective in the final clean-up: a sort of gas barrage to catch the stragglers. Salihoxin has also proved valuable, especially in cases with pyelitis or gall-bladder infection.

For the more chronic and debilitated cases of infectious arthritis and for the atrophic cases, you would hardly recognize from reading the prescriptions for what the patient was being treated. They are receiving vitamins and endocrines and feeding or drugs for anemia.

Most of the patients are on a high caloric diet. Where the diet is in any way restricted it is from considerations affecting the colon.

In the hypertrophic cases the diet is often restricted to control obesity, as well as to regulate the colon. Most of these cases receive thyroid.

Physical therapy is considered a valuable adjunct to treatment in most cases. Those which have an acid sweat, as tested by litmus on other parts of the body than hands and feet, are considered to need sweating. With the others the effect of heat in improving the body circulation is considered the important effect. The value of ultra-violet is as a general tonic.

What special contribution can the orthopedic surgeon make to the treatment? He is

usually especially interested, because all too often he sees cases where a limb or the whole body has become completely wrecked by arthritis. He is usually a good member of the study group to work on earlier cases.

Plaster casts or splints may be used early to enforce physiological rest or to overcome muscle spasm in very acute stages. They are often necessary to prevent deformity. Later, where there is deformity without too firm contraction, apparatus may be used to overcome it.

In a joint which can be salvaged brace protection to allow earlier weight bearing is valuable and hastens recovery.

If the cartilage is too badly damaged to allow recovery of a useful range of motion it is better to immobilize the joint and try to get early ankylosis. A small range of painful motion is a curse to the patient and predisposes to new flare-ups in the joint. In some cases of hypertrophic arthritis, braces which support the knees or back and allow a limited motion between non-painful limits, are a great help.

Physical therapy, especially diathermy, must be used in all cases where one is attempting to mobilize the joint.

Various operations are indicated at different stages and for different purposes.

An exploratory operation, or biopsy, is indicated in many severe cases to attempt to determine the infecting organism and to rule out T. B. This is especially important in non-articular cases.

Washing out the joint early is of great value in all non-tubercular cases where only one joint is involved, and a little later, when other joints are recovering, but one remains severely and constantly affected.

Synovectomy is indicated in chronic cases of infectious arthritis of moderate severity with much synovial hypertrophy. It is most useful in the knee. Some knees with hypertrophic arthritis are benefited by synovectomy. Sometimes it is proper at the same time to take out both semi-lunar cartilages.

For obstinate contractions operations on the tendons and fascia are much better than forcible manipulation or turn-buckle apparatus.

These operations will often require division or better sub-periosteal detachment of the resisting ligaments.

Joints in which no useful painless motion can be obtained and spontaneous ankylosis does not occur after reasonable immobilization should be opened and the cartilage remnants removed and the bones shaped to secure firm ankylosis.

In the bad cases of hypertrophic arthritis of the hip one of the newer reconstruction operations should be done.

Arthroplasty must be reserved for young and courageous subjects in which the infection in the joint has been entirely quiescent for a year, and in which there is no suspicion of T. B.

635 Argyle Bldg.,
Kansas City, Mo.

Abstract

ECTOPIC URETERS OPENING INTO URETHRA

Herman L. Kretschmer and N. Sproat Heaney, Chicago (Journal A. M. A., May 11, 1929), report a case in which both ureters opened into the urethra with bilateral calculi. A young woman, aged 21, complained of incontinence of urine, passage of kidney stones and pyuria. The patient had had incontinence of urine since birth. Her mother stated that until the patient was 18 years of age, or three years before examination, she had not had any control whatever of the urine. Since the age of 18 there had been some slight control. The patient had had many attacks of renal colic. The last attack occurred in October, 1925. On physical examination the patient appeared well nourished and not acutely ill, but she was apparently very nervous in make-up. Examination of the external urethral orifice showed it to be wider than normal, markedly red and relaxed. The openings of two ureters were seen opening on the floor of the urethra at the junction of the posterior third with the anterior two-thirds of the urethra, which was a scant inch in length. Pelvic examination, under ethylene gas anesthesia, showed a uterus bicornis unicollis. The cer-

vix was rather small. The vagina was normal. The urethral opening appeared quite relaxed. When forceps were applied to hold the urethra apart, air entered and showed 2 or 3 ounces of urine in the normal appearing bladder. The urethra had a calibration of more than one-half inch and was 1 inch long. The walls were membranous and very thin. On the floor of the urethra could be seen, at a point about two-thirds inch from the external urethral orifice, the widely dilated openings of both ureters. A uterine sound could be introduced without effort for a distance of 8 inches into each ureter. The ureters were also thus determined to lie just under the mucous membrane of the vagina from the urethra up to the vaginal vault. Under ethylene anesthesia an operation was performed. An elliptic flap of mucous membrane was removed from one-third of the circumference of the urethra and from the base of the urethra for a third of its length. Fascia was brought from the side walls of the urethra over the denuded area so as to increase the urethral tone, and the denuded area was then closed from side to side. Catheters were left in both ureters so that post-operative edema might not close them off. The following day the patient was in excellent condition and 900 cc. of urine was drained through the catheters. During the second day the catheters came out and were not reinserted. June 30, the patient voided 825 cc. of urine. June 28, the temperature, previously normal, rose to 101.8 F. June 29, the temperature reached 103.4 F. but rapidly returned to normal, so that after July 2 it never rose above 99 F. July 1, the patient had severe cramps and the following day a small particle of gravel was passed. July 3, the patient again had severe pelvic pain and began to menstruate. July 4, the patient had severe abdominal pain which was only partially relieved by enemas. She died the next day. No postmortem examination was obtained. Kretschmer and Heaney made a study of the literature and conclude that theirs is the first clinical case of this condition.

THE JOURNAL

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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ARTICLE II.—PURPOSES OF THE SOCIETY

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Arkansas and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

Editorial

PRO AND CON

(OLIVER C. MELSON, M. D., Little Rock)

Boston, the home of the bean and the cod, was the meeting place this year of the American College of Physicians. Besides the bean and the cod, Boston is the home of a group of scientific physicians who have not forgotten about the humanities. Those who attended this meeting from other parts of the country can testify as to the excellence of the program, the diversity of the entertainment and the genuineness of the hospitality.

Clinics in the mornings, papers in the afternoons, and more papers in the evenings was the order of events. The hospitals of Boston outdid themselves in the matter of clinics. In the main they were conducted by the various staffs, but several were given by a "guest conductor." In all, there were seventeen hospitals and laboratories where clinics or demonstrations were held, which while making it impossible for one person to visit them all, gave a wide range of choice and an abundance of clinical material.

Perhaps one of the most interesting of the clinics was the one by Dr. Richard Cabot at the Massachusetts General Hospital. This was in the form of a clinico-pathological conference, Dr. Cabot making his diagnosis from the history, physical findings, and laboratory reports, and Dr. T. B. Mallory giving the autopsy findings. On this particular morning, the gods were with Dr. Cabot and his clinical diagnosis coincided very nicely with the pathologist's report. I do not believe there was any collusion between the two.

Another thoroughly enjoyable clinic was staged by Dr. Lewellys Barker. The case he showed was one of Paget's disease of the bone.

At the Peter Bent Brigham Hospital I heard some very pessimistic figures in regard to the curability of duodenal ulcer. The percentage of cures was below 50 per cent. This included surgical, as well as medical cures, and was both a surprise and a disappointment to me as I have labored under the impression that "cures" have ranged around 80 per cent.

I have only mentioned a few of the clinics that I attended. Several others were of unusual interest and value. Especially of note were those by Dr. Christian, Dr. Harvey Cushing, and Dr. David Riesman.

One of the most instructive features of the entire meeting was the symposium on the deficiency diseases by Dr. Minot and his associates of the Thorndike Memorial Laboratory, Dr. Wolbach of Boston, Dr. Cowgill of New Haven and Dr. West of New York. These gentlemen presented the subject in all its phases, and when it was over, one had the feeling that the last word had been said so far as our present knowledge would allow.

"The Failing Heart of Middle Life" was the subject of a paper by Dr. David Riesman of Philadelphia. If the applause he received can be taken as a criterion, it was the masterpiece of the session, for he had to take a curtain call. When it appears in the official journal of the College, it should be read by all medical men not only for the benefit of their patients, but for their own personal benefit as well.

Lawrason Brown of Trudeau Sanatorium, says that tuberculosis may be easily arrested but is difficult to cure. To arrest it may take only three months, to rid the sputum of bacilli it may take only two years; but to make a family absolutely free from contagion by the patient the latter should be treated from diagnosis to death.

Barker divides the affective disorders into two classes; depressive and expansive or exhilaratory. They are self-limited and progress in waves. He considers them as true psychoses. The first type have a feeling of inadequacy, of unworthiness and the like—an inferiority complex. The second group is made up of the jovial back-slapping individuals with a highly developed ego. This paper called attention to the importance of recognizing these types in the early stages so that an effort may be made to prevent more serious developments.

Pincoffs of Baltimore, presented a series of cases to show that blood pressure may rise in paroxysms. He offered this as a possible explanation for the attacks of dyspnea, pain and orthopnea at night experienced by patients with hypertensive disease, pulmonary edema, angina pectoris coronary sclerosis, myocardial infarction and the like. It will be interesting to check up Dr. Pincoffs observations.

Two points worth remembering were brought out by Dr. W. W. Herrick of New York, in speaking of prognosis factors in high blood pressure. The first is that the inability

of the vascular system to accommodate for exercise is a bad prognostic sign in hypertension. The second is that a climbing systolic associated with an unchanged diastolic is likewise an unfavorable prognostic sign. He holds that tortuosity and thickening of the large arterial trunks may not be particularly alarming.

Dr. George E. Vincent, President of the Rockefeller Foundation, was the speaker at the annual banquet. As usual, he was in fine form and lived up to his reputation of post-prandial speaker de luxe.

Boston is a delightful convention city, and the Boston physicians did much to dispel that idea in the minds of some that Bostonians are distant and reserved.

Editorial Clippings

THE QUESTIONNAIRE NUISANCE

One of the many by-products of the modern art of advertising is the advertising agency, whose business it is to prepare advertising campaigns for those who wish to cry their wares in the market places. Out of the business of preparing advertising campaigns has grown one of the most intolerable nuisances that ever plagued the medical profession—the questionnaire. The fault rests primarily on those members of the profession who, with easy-going tolerance, give for the asking expert opinions that are based on much work and special study. Some of these questionnaires come frankly from advertising agencies; others, although also emanating from advertising agencies, are camouflaged with names such as "research" or "bureau." The following are some of the questionnaires with which the medical profession has been plagued during recent years: Lord and Thomas, advertising agents of Los Angeles, sent letters to dermatologists in the interest of the California Fruit Growers' Association on the effects of lemon juice when used as a hair rinse. Lord and Thomas and Logan, New York, circularized physicians in the interest of the manufacturers of "Lucky Strike Cigarettes." Williams and Cunyngham, an advertising agency, went to the profession seeking advertising data on asthma and hay fever. Physicians received a questionnaire from "The Editors" of the *Medical Review of Reviews*, addressed to dermatologists re-

garding a survey of methods of washing the hands to insure freedom from skin diseases, preservation of line and contour, etc. The National Research Bureau of Cincinnati (a fancy name used by Proctor and Collier Co., an advertising agency) also sent out a questionnaire to dermatologists. A questionnaire was sent out by the "Medical Research Bureau" of New York, dealing with the use and prescribing of sedatives, the data to be used by John B. Daniels, Inc., Atlanta, Ga., makers of Pasadyne. A questionnaire was sent out by the "Medical Research Bureau" of Chicago in regard to a profit-sharing method of supplying drugs in quantities direct from the wholesaler. Physicians should consign to the wastebasket every questionnaire that asks for free advice and comes from commercial or unknown sources. (Jour. A. M. A., March 23, 1929, p. 1004).

ARKANSAS ENACTS A BASIC SCIENCE LAW

Arkansas has enacted a basic science law, to relieve the situation brought about by the presence of five boards, each authorized independently of the rest to issue licenses to practice the healing art. Each such board has heretofore been the sole judge of the credentials of candidates applying to it for licenses. Under the basic science law, however, no licensing board can examine an applicant until after the basic science board has been satisfied that he is not less than 21 years old; is of good moral character; was graduated by an accredited high school or had an education equivalent to that required for such graduation, before he began the study of the basic sciences, and has a comprehensive knowledge of the sciences of anatomy, physiology, chemistry, bacteriology and pathology. If the applicant has passed an examination in the sciences named, in another State, before a basic science board or licensing board, the Arkansas basic science board may, in lieu of examination, accept evidence of that fact; otherwise, the board must examine the applicant. The fact that an applicant cannot appear before a licensing board unless his preliminary qualifications have been certified by the basic science board does not in any way diminish the authority of the licensing board to scrutinize the qualifications of applicants when they do appear. A person who was

not already licensed in Arkansas when the basic science act was passed cannot lawfully practice without obtaining a basic science certificate, as well as a professional license. Each of the five licensing boards is required hereafter to report annually to the secretary of State all persons licensed by it during the preceding year and to certify to him after each examination the names of all persons licensed since the preceding list was submitted. The secretary of State must then send copies of every such list to the sheriff and the prosecuting attorney of each county. The basic science act makes it specifically the duty of every sheriff, police officer and peace officer to investigate all supposed violations of it and requires the attorney general and the several county attorneys to prosecute all violations. The act is the result of an energetic campaign by the Arkansas Medical Society and should go a long way toward raising the standards of those who practice the healing art in that State.—Jour. A. M. A., April 27, 1929.

Personal and News Items

At a recent meeting of the Polk County Medical Society the following officers were elected for 1929:

President, F. A. Lee; Vice-President, F. Q. McElroy; Secretary, F. C. Mullins; Delegate to the State meeting, B. H. Hawkins; Alternate, J. G. Hilton.

Dr. C. W. Garrison, State Health Officer for the past twelve years, was re-elected by the State Board of Health for a four-year term.

Dr. O. L. Williamson of Marianna and Dr. F. O. Mahony of El Dorado were reappointed by Governor Parnell as members of the Board of Health. Their terms will expire December 31, 1932.

Dr. William A. Kriesel, Little Rock, has returned from Minneapolis, Minn., where he was called on account of the death of his father.

The First Councilor District and Northeast Arkansas Medical Society held their spring meeting at Tyronza, May 2. The Craighead-Poinsett County Society was host for the meeting.

The Randolph County Medical Society met April 18, 1929, and elected the following officers for the ensuing year:

President, J. K. Loftis; Vice-President, W. E. Hamil; Secretary-Treasurer, W. E. Hughes; Delegate to State Meeting, W. E. Hughes; Alternate, L. R. Pace; Censor, three years, J. W. Brown.

Dr. Paul Z. Browne, Hot Springs, formerly with the Martin Clinic announces the removal of his offices to the Dugan-Stuart Building.

The Arkansas Tuberculosis Association held its 21st Annual Meeting and Conference in Little Rock, May 6-7, 1929.

While en route to Hot Springs by auto to attend the State Medical Society Convention, Dr. W. A. Montgomery of Atkins was seriously injured. In the car with him were Dr. Webb and Dr. Scarlett of Russellville, both of whom escaped with minor injuries.

Dr. and Mrs. Oliver C. Melson and Dr. Wm. R. Bathurst of Little Rock attended the recent meeting of the American College of Physicians at Boston.

The May meeting of the Arkansas Medical Society came to a close just as this issue of the Journal was ready for the press. A report will appear next month and the complete transactions will be published in the July number.

Officers elected were as follows:

President, Thad Cothorn, Jonesboro; President-Elect, E. E. Barlow, Dermott; First Vice-President, Geo. B. Fletcher, Hot Springs; Second Vice-President, B. H. Hawkins, Mena; Third Vice-President, J. G. Gladden, Western Grove; Treasurer, R. J. Calcote, Little Rock (re-elected); Secretary, Wm. R. Bathurst, Little Rock (re-elected).

Dr. Dewell Gann, Sr., Benton, was re-elected chairman of the council and Dr. S. J. Wolfermann, Fort Smith, was named secretary.

Fort Smith was selected for the 1930 convention.

Dr. O. M. Bourland, Van Buren, stopped over in Little Rock on his return from his recent visit to Battle Creek, Michigan.

Dr. Robert E. Wyers, formerly a well known Little Rock physician, who left for the West about a year ago to accept a position on the staff of the Patton, Calif. Hospital, has been selected to serve on the staff of the State Nareotie Hospital at Spadra, Calif. Dr. Wyers is a graduate of the University of Arkansas School of Medicine, Class of 1927, and Mrs. Wyers is the daughter of Mrs. T. C. White, 804 North Street, Little Rock. The promotion of Dr. Wyers is considered an unusual distinction.

Dr. F. Walter Carruthers announces the opening of an office with the Medical & Surgical Clinic of Texarkana, of which Dr. E. L. Beck is the head. Dr. Carruthers is in Texarkana every two weeks on Saturdays only.

Drs. W. R. and Earle Hunt of Clarksville were recent visitors in Little Rock.

Dr. Henry Thibault, of Scott, who has been in Kerrville Sanatorium under care of Dr. Sam Thompson, is reported as having gained fifteen pounds, and will spend the summer in Colorado, recuperating.

On Saturday, May 18, 1929, a Health Conference was held in Sheridan, under the auspices of the Grant County Medical Society.

Miss Wright, County Health Nurse, got the clinic up and had some fifty patients present for examination. The Clinic was held in the offices of Drs. Kelly and Hope. Assisting these doctors in the clinic were Drs. S. F. Hoge, F. Walter Carruthers and George F. Jackson of Little Rock.

Drs. Robert Caldwell and F. Walter Carruthers of Little Rock have been elected members of the staff of the St. Bernard's Hospital of Morrilton, Arkansas.

The Bureau of The Public Health Service announce the Second International Malaria Congress will be held at Algiers during May, 1930.

Dr. F. Walter Carruthers of Little Rock, won the Dewell Gann, Jr., Golf Tournament at Hot Springs, winning the loving cup which Dr. Gann offers every year. This is the second consecutive time Dr. Carruthers has won the cup, having won it last year at El Dorado.

Obituary

MORELAND, SILAS W.—Dr. S. W. Moreland of near Jonesboro, died April 29, 1929. Aged 78. His death was due to heart disease. Dr. Moreland was a former president of the Northeast Arkansas Medical Society.

VANDIVER, WILLIAM C.—Dr. W. C. Vandiver of Mena, died May 12, 1929. Aged 69. He was the oldest practicing physician in Polk County. Dr. Vandiver is survived by his wife, two sons and two daughters.

County Societies

CRAIGHEAD COUNTY

(Reported by THAD COTHERN, Sec.)

The Craighead-Poinsett Counties Society met April 3, at 6:30 P. M., in LaBoheme of the Hotel Noble. Present: Altman, Bates, Cothorn, Haltom, Hunn, P. W. Lutterloh, McCracken, McCurry, Nisbett, Overstreet, Stroud, Sloan, Verser, Willett, Pratt and Finch. Mrs. Williams, the Metropolitan nurse, and Miss Warren, Craighead County Public Health Nurse, Dr. J. H. Lamb and Dr. W. M. Majors of Paragould, were guests of the Society at the meeting. The banquet over, the scientific program, a symposium on "Tuberculosis," was taken up. Some very able papers were read by Drs. Altman, Bates, McCurry, Hunn and Stroud.

JACKSON COUNTY

(Reported by K. K. KIMBERLIN, Sec.)

The Jackson County Medical Society met in the office of the Newport Sanitarium on the evening of April 16, at 8 o'clock. The following officers were elected: President, M. L. Harris, Newport; Vice-President, J. R. Loftin, Grubbs; Secretary,

K. K. Kimberlin, Tuckerman; Delegate to State meeting, I. H. Erwin, Newport; Alternate, J. B. Ivy, Tuckerman.

DALLAS COUNTY

(Reported by J. E. M. TAYLOR, Sec.)

The Dallas County Medical Society met at Fordyce, Wednesday, April 10. Present: Ward, Atkinson, Cheatham, Wilson, Stewart and Taylor. The following scientific program was rendered: "The Toxemias of Pregnancy," by H. H. Atkinson. "Bronchial Pneumonia of Children," by A. M. Stewart. After the regular business session at The Fordyce Lumber Company's Hospital, the members met in a social hour at the Kilgore Hotel. The subject of the evening was "Kansas City T-Bone Steak and Trimmings." The next regular meeting will be held in June.

POPE COUNTY

(Reported by Wm. P. SCARLETT, Sec.)

The Pope County Medical Society met in regular session April 11, at Atkins, in the City Club Rooms, the luncheon being served by the ladies of the Presbyterian Church. Present: Tate, Truett, Campbell, Montgomery, Yates, Smith, Jones, Drummond, Webb, Stanford, Hood, Linton, Mason, Haney, Scarlett, Griffin, Millard, Christian and Haster. Ardis Tyson, editor of the Atkins Chronicle and J. M. Barker, President of the Bank of Atkins, were visitors. The program included talks by Dr. R. L. Smith, who interestingly told "Why the Patient Should Pay the Doctor;" "Conservation of Man Power," by Dr. Robert Hood, and a short talk by Dr. H. S. Drummond.

It was announced during the business session that the society would sponsor a float in the May Day Child Health Day Parade. The next meeting will be held at London, May 9, at 7:00 P. M. Drs. G. W. Jones, A. B. Tate and Y. E. Millard will furnish the program, which will have as its topic "The Public Health Question."

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular monthly session, Thursday night, April 4, at the Sanitary Tea Room, Camden. After a delightful banquet, a very interesting paper on "The Treatment of Diabetes Mellitus" was read by Dr. L. F. Barrier of Little Rock.

Present: Rinehart, Early, Jameson, Worthington, Newson, Sanders, Sam Thompson, Partee, James and L. F. Barrier of Little Rock.

The following officers were elected for the ensuing year:

President, J. S. Rinehart; Vice-President, J. B. Jameson; Secretary-Treasurer, R. B. Robins; Delegate to the annual meeting, Sam Thompson; Alternate, G. P. Sanders.

ST. FRANCIS COUNTY

(Reported by J. O. RUSH, Sec.)

The St. Francis County Medical Society met April 3, 1929, in the Chancery Court Room at Forrest City.

The following officers were elected for the ensuing year: President, E. W. Pollard, Vice-President, N. C. McCown; Secretary-Treasurer, J. O. Rush.

Drs. Pollard and Rush were made the Committee on Program and Arrangements.

The next meeting will be in May, and it will be held in the evening. A dinner will be served. The program will consist of two papers by two outside men, to be selected. Dr. Powell, delegate to the State meeting, will give a report of the session.

ASHLEY COUNTY

(Reported by J. W. SIMPSON, Sec.)

The Ashley County Medical Society met March 22, 1929, in the office of Dr. L. C. Barnes, Hamburg.

Present: Crandall, Barnes, Houston, Setzler, Norman and Simpson.

The following officers were elected for the ensuing year: President, M. C. Crandall; Secretary and Treasurer, J. T. Wood; Delegate to the State meeting, L. C. Barnes.

The next meeting will be held in Wilmot, supplemented with a fish fry. The date will be announced later.

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society held its regular meeting for April at Rogers. The meeting was called to order by President Seott.

Members present: Hurley, Atkinson, Wilson, Scott, Smiley, Harrison, Clemmer, Eubanks, Thompson, Koobs, Powell, Hughes, Cox, Dunean, Ramsey, Ireland, T. E. Hodges, Moore, Duekworth, McNeil, Curry and Guy Hodges.

Visitors: Wood and Ellis of Fayetteville; Mock and McCormick of Prairie Grove; Robinson of Cincinnati; Henry of Springdale, Pickens of Bentonville; Sellers of Westville, Okla.; Wolfermann, Eberle and Hoge of Fort Smith.

The scientific program was as follows:

"Bedside Diagnosis of Diseases of the Upper Abdomen" by Dr. S. J. Wolfermann, Fort Smith.

"Jaundice," by Dr. W. G. Eberle, Fort Smith.

"Diseases of the Gall Bladder," by Dr. A. F. Hoge, Fort Smith.

ST. FRANCIS COUNTY

(Reported by J. O. RUSH, Sec.)

The St. Francis County Medical Society met in regular session at the Arlington Hotel, Forrest City, May 16. Dinner was served at 7:30, after which the following scientific program was rendered.

"Varicose Veins of the Lower Extremities" by Dr. McCown.

"Peptic Ulcer," by Dr. Campbell.

"Puerperal Eclampsia," by Dr. Powell.

"Loose Bones in the Joints," by Dr. Mitchell.

"Relation of the Health Nurse to Members of the Profession," by Miss Mary Boyse.

The next meeting will be held in Hughes, June 20, at which time the Society will be given an old fashioned "fish fry."

Present: Bogart, Caldwell, McCown, McDougal, Proctor, Boggan, Rush, Chaffin, Pollard and Powell. Visitors: E. G. Campbell and Joseph I. Mitchell of Memphis; Robert J. Hall of Wheatley; S. C. Russwurm of Hughes; W. A. Winter of Widener, and Miss Mary Boyse, Public Health Nurse of Forrest City.

The society now has the largest membership in its history.

Book Reviews

Bedside Diagnosis.—By American Authors, edited by George Blumer, M. D., Clinical Professor of Medicine, Yale University, School of Medicine; Attending Physician to the New Haven Hospital. Three Octavo volumes, totalling 2,820 pages, containing 890 illustrations. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$30.00 a set. Separate desk index volume free.

One feature in Volume One, under "Infectious Diseases," Subdivision G, written by Dr. Lloyd K. Ketron of Baltimore, describes actinomycesis, streptothricosis, sporotrichosis and blastomycosis. Drs. Fred Wise, Howard Parkhurst and I. L. McGlasson give the general diagnosis of syphilis.


In Volume Two the contents are as follows: "Diseases of the liver, pancreas, peritoneum, lungs, mediastinum, circulatory organs, blood vessels, lymph glands and urinary system."

Volume Three gives chapters on the endocrines and nervous system. The subject of Neurosyphilis is given by Dr. Leon Hastings Cornwall. He states that "a positive Wassermann reaction in the spinal fluid means neurosyphilis." Several illustrative cases are

given. The book is illustrated and a 143 page general index accompanies the volumes without any charge.

WANTED—We have several young men and women well trained as practical laboratory technicians graduating from our School of Public Health. Physicians, surgeons, hospitals, clinics and health departments desiring such service can secure it by writing immediately. Address Dr. L. H. South, Director, Bureau of Bacteriology, Kentucky State Board of Health, 532 West Main Street, Louisville, Ky.

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Kansas City Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society

October 7, 8, 9, 10, 11, 1929, Kansas City, Mo.

Headquarters and Meetings at President Hotel.

Operative and Diagnostic Clinics daily from 8:30 to 11:30 at Allied Hospitals.

A Complete Post-Graduate Course at the President Hotel, Twenty classes each morning.

Clinics and Clinical Lectures each afternoon by the following distinguished guests:

Dr. Chevalier Jackson, Philadelphia, demonstrating the uses of the bronchoscope and the removal of foreign bodies from the bronchi of the lungs. He will also give an address on "Pulmonary Congestions."

Dr. George W. Crile, Cleveland, will give an address on "The Surgical Abdomen, and will hold a surgical diagnostic clinic."

Dr. Thomas McCrae, Philadelphia, giving a clinic on "Unusual and Usual Medical Cases." He will give an address on "Differential Diagnosis of Certain Chest Lesions."

Dr. Bela Schick, Austria and New York City, will demonstrate his famous "Schick Test," give a clinic and an address on "Feeding Problems in Children."

Dr. William Allen Pusey, Chicago, will hold a clinic on "The Diagnosis and Treatment of Certain Skin Diseases." The subject of his address will be the "Use of Helio-therapy in the Treatment of Certain Skin Lesions."

Dr. Robert Osgood, Boston, will give an address on "Newer Methods in Treatment of Arthritis," and a clinic on "Polyarthritis."

Dr. J. C. Litzenberg, University of Minnesota, will give an account of his latest research on "Tubal Pregnancy," and will hold a clinic on "The Differential Diagnosis of Tubal Pregnancy."

Dr. Vilray P. Blair, St. Louis, will give a clinic and demonstration of "Plastic Work on the Face," and an address on "Newer Methods of Skin Grafting."

Additional distinguished guests will be announced later.

ENTERTAINMENT:

Public Meeting, Monday Evening.
Get-Together Smoker, Tuesday Evening.
Alumnae Dinners, Wednesday Evening.

Golf Tournament, Friday Afternoon.
Golf Dinner, Friday Evening.

DIETING

for slimness ruinous to health
of Hollywood's stars

☞ *Doctors and nurses, in warning the public of the dangers of extreme dieting, will find support in the sad experience of motion picture stars.*

A NEW danger to the health of motion picture stars has just been revealed. The motion picture camera, in photographing a star, adds from 5 to 20 pounds to the appearance of her figure, so that many of the screen celebrities, because of the fad for slimness, have felt called upon to undergo rigorous programs of dieting.

Photoplay Magazine recently announced that many of the stars have suffered collapse because of this dangerous practice. One famous star died of tuberculosis aggravated by weightreduction. Another ruined her career and was made an invalid by starvation. Still another resorted to quick-reducing medicines and is today virtually an invalid. Another star, as mentioned here, collapsed on a set from trying to lose 10 pounds.

One of the alarming dieting extremes indulged in by the stars, according to *Photoplay*, is eating no food at all for breakfast, and seriously limiting the quantities of nourishing foods for both luncheon and dinner. It is small wonder that such a wrong standard of diet should result in disaster. No person can be healthy without eating enough nourishing food, daily and regularly.



Physicians and nurses and teachers, looked to by the public as health authorities, should help bring a speedy end to the dangerous practice of indiscriminate diets to reduce.

The "boyish" figure is a false standard of feminine beauty, and its attainment is likely to be at the price of permanent injury.

Modern health opinion recommends a variety of foods, including vegetables and fruits, both fresh and canned, sweetened for enjoyment. Sweetness is the flavor that encourages the ingestion of nearly all the healthful

roughage, vitamin-bearing foods. Breakfast is a meal likely to be slighted by young working girls and many other busy working people. For this meal applesauce is recommended, or grapefruit, dried and canned fruits and cereals, using sugar to develop the delicious flavors of the beneficial foods.

Let the American people be warned to eat enough. Most foods are more delicious and nourishing with sugar. Good food promotes good health. The Sugar Institute, 129 Front Street, New York, N. Y.

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Original Articles

MODERN METHODS IN OBSTETRICS*

G. D. ROYSTON, M. D., St. Louis, Mo.

Mr. President and Members of the Arkansas State Medical Society:

I want to thank you for the honor of being permitted to appear on your program in my native State. Your generous allotment of time permits me to try to tell you what we are doing and what we have found to be of most practical value in the Washington University School of Medicine, St. Louis. I shall touch on several different subjects in obstetrics in my effort to present some things of interest.

Such investigators as Mosher, Chairman of the Committee of Maternal Welfare, Mendenhall of the University of Indiana, Polak of Brooklyn, and P. Brooke Bland of Jefferson Medical College in Philadelphia, all agree that the maternal death rate of 68 per 10,000 births in the United States has shown no appreciable improvement during the past fifteen or twenty years. During 1924 and 1925, America stood last among twenty-one countries with available statistics. Denmark, with 11,000 midwives, all registered and controlled by the Health Department, has a maternal death rate one-fourth as high as America. Bland states that one mother out of 155 dies in labor or shortly thereafter, while complications of pregnancy raises the death rate still higher. In reality, America must accept the annual figure of 25,000 mothers and 300,000 babies dying annually, and 250,000 women surviving who are left more or less invalids following childbirth.

Bland estimates that for every hundred maternal deaths, fully 40 per cent are due to infection; 36 per cent to toxemia with other

complications of pregnancy; 12 per cent to accidents of labor, and 9 per cent to post-partum hemorrhage. A study of the mortality in the United States and Canada showed that among women without adequate prenatal care it was seven to eight times greater than among women receiving proper care. It is asserted that 75 per cent of the maternal morbidity and mortality can be prevented by zealously practicing ante-natal measures alone (toxemia, premature detachment of placenta—toxic, etc.)

In Norway the mortality was more than four times as great in cases delivered by means of surgical interference as compared with the average loss from other puerperal causes, (12.9 versus 2.9). Fully 50 per cent of gynecological work is the result of unskilled maternity service, before, during, and after labor. Three great factors are stressed: Septicemia, the most mortal complication of labor; toxemia, the most deadly complication of pregnancy; hemorrhage, the most sudden and rapidly progressing complication of pregnancy, labor, or early puerperium. Proper care requires time and effort on the part of both physician and patient. Frequently there are present complications in the causes of maternal deaths, since many cases of contracted pelvis and dystocia eventually die as the result of infection. Also, the patient who has had a severe hemorrhage is much less resistant and falls a ready victim to sepsis.

It has been suggested that our results can be improved if we will give adequate attention to three points: First, education in asepsis and obstetrical technic; second, in urging our patients to apply for prenatal care early in their pregnancy, since most toxemias can be prevented or steps taken in advance to deal properly with complications under suspicion when they develop in spite of our efforts to prevent them; third, an honest, prompt and automatic reporting of all births to the Census Bureau.

*Read before the 54th Annual Meeting of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

I shall mention first, in prenatal care a general physical examination should be done and foci of infection such as the teeth, the respiratory tract including tonsils, and the urinary tract be investigated and appropriate treatment given same. The individual with tuberculosis should be treated primarily for her tuberculosis with adequate rest, food, sunlight, etc., when it will be found that the pregnancy has not been nearly so much the cause of her decline as the tuberculosis which had been overlooked. Our experiences incline us to the view of Forssner of Sweden, who had carefully studied cases of tuberculosis and pregnancy and found that if the tuberculosis itself were treated properly the lung condition was no worse; but often seemed to improve somewhat more rapidly in pregnancy than in the non-pregnant state. Heart lesions should be investigated and the woman safe-guarded from undue exertion and fatigue. If she has ever had a decompensation the dangers of a long, hard labor are greatly increased because of the heart condition. However, a heart murmur in the absence of a decompensation requires simply watchfulness and in the event that such signs or symptoms appear, the patient should be digitalized with massive doses of digitalis before the expected confinement, and the second stage of labor shortened as much as safety and the avoidance of shock at this time will permit. Ether or local anesthesia are the anesthetics of choice. In severe cases of decompensation, especially in primiparae with rigid soft parts, abdominal section under morphine-hyoscine and local anesthesia has given great satisfaction in our hands. Any dental work deemed advisable is permitted at any time during pregnancy provided the patient is spared the shock of marked pain. A chronic appendix giving symptoms should be removed at any period irrespective of the pregnancy, since an acute attack is apt to be followed by general peritonitis rather than abscess formation. The most constant sign in this condition is a tender point in the lower right quadrant, more in the flank, with some rigidity on deep pressure where it is more marked than at any other point in the abdomen. The mortality in operations for appendicitis between attacks is no higher during pregnancy than in the non-pregnant state; whereas, operation for a sup-

purative appendicitis during pregnancy is followed by a mortality of nearly ninety per cent.

Less frequently gall-bladder conditions may also be present during pregnancy and should be treated palliatively unless the condition becomes definitely worse, when it should be treated as such, irrespective of the pregnancy. Pyelitis in greater or lesser degree occurs in possibly five to ten per cent of all pregnancies and usually escapes notice. The right kidney is nearly always the one involved; the left but rarely, except in bilateral infections. So long as the kidney drains well the pain high up in the back is usually not marked and fever and chills are uncommon; but any interference with free drainage causes marked symptoms of chill, fever and pain. All such symptoms call for a careful urinalysis, which includes a microscopic examination of a *centrifuged* specimen of urine. Absolute rest in bed with the foot of the bed elevated four or five inches, colonic flushing with tap water morning and evening, forced fluids and the administration of some form of hexamethylenamin. Urotropin, urolithia, capropol, etc., for colon bacillus infections, and pyridium for coccus infections has been quite satisfactory. If the case does not respond quickly and symptoms increase, ureteral catheterization, often leaving the catheter in the kidney pelvis for one or two days to insure ample drainage, during which time the renal pelvis may be irrigated every few hours; the mechanical drainage being the most important part of the treatment.

Pain in the lumbo-sacral region, hips and calves is most commonly due to faulty posture, the result of low arches. Suitable walking shoes or corrective shoes with foot exercises that stretch the ligaments of the external malleolus will usually relieve this condition.

About two-thirds of all pregnant women suffer more or less with nausea or vomiting at some time during their pregnancy; most frequently in the morning after a night's period of starvation.

We feel that all nausea and vomiting of pregnancy is more or less the same thing, varying only in degree and stage, and the patient often emerges from what had been considered a condition that must be borne by all pregnant women into a true toxic or pernicious vomiting, which is dangerous to life. Much can be done to relieve this unpleasant condition by the following measures: First,

avoid fatigue and odors; second, force fluids up to 4,000 cc. daily; third, forced feeding of small quantities of a diet of high carbohydrates, low fat and moderate protein. We usually advise such patients to eat every two hours, since they are unable to take a quantity sufficient for their needs when eating only three times a day. We must bear in mind that not only has the vomiting patient lost hydrochloric acid in her vomitus; but she has also had regurgitation of alkaline intestinal contents neutralizing the hydrochloric acid present in the stomach. In many instances dilute hydrochloric acid, ten drops in a glass of water given before and after meals, is helpful. In other cases caffeine citrate in doses of two grains, given ten to fifteen minutes before meals, will stimulate the gastric secretion to produce its own hydrochloric acid. Exertion of any kind aggravates the condition.

Toxic vomiting should be treated before such a state is reached, as we feel that death occurs as the result of starvation and dehydration. Whenever vomiting is present the patient should remain in bed, isolated from all visitors and household responsibilities, be given luminal by mouth or luminal sodium by hypodermic, every four to six hours, enough to keep drowsy, and an attendant should force food and fluids as prescribed. If she is still unable to retain enough to show a gain in weight, fluid should be given by rectum, under the skin, or intravenous glucose solution, 10 to 20 per cent, usually in connection with subcutaneous injection of Ringer's solution, or normal saline solution, enough to insure the patient's retaining at least 4,000 cc. of fluids every day. A nasal tube is passed into the stomach through which the patient is fed water containing 10 per cent Karo syrup, 50 cc. every hour, gradually increasing until she is getting a maximum of 300 cc. per hour. Should she be unable to retain so much, drop back 50 cc. at a time until the amount that she can tolerate is reached and give it in that way. Ordinarily, within two or three days the patient can be taking toast, cereals, stewed fruits, boiled vegetables, gradually increasing to regular diet as retained. Usually she will have to gain an average of about eight pounds before the nausea and vomiting disappear.

I wish to emphasize that all vomiting patients during pregnancy should be treated early and actively, and not be subjected to too long a period of waiting, in the hope that the condition will improve of itself. Since following this method I have not had to do a therapeutic abortion on one of my private patients for eight years; although if such toxic vomiting persists too long, certain changes may take place in the maternal organism, which will require therapeutic abortion to interrupt the pregnancy.

During protracted nausea and vomiting a well-balanced vitamin intake is important in preventing nervous sequelae.

Nausea and vomiting appearing only in the afternoon or night is often the result of fatigue and requires more rest. Every pregnant woman should have at least ten hours sleep daily, often supplemented with a two-hour nap during the day. A sedative of value in this connection is sodium bromide, one teaspoonful of crystals dissolved in a glass of starch water and given by rectum every twelve to twenty-four hours. This may be used instead of luminal.

Nausea and vomiting appearing first or becoming definitely more pronounced during the last three months of pregnancy is strongly suggestive of toxemia, nephritic or eclamptic. For this condition we prescribe ample rest, often in bed, limit all proteins, condiments and fats, force fluids and elimination. Colonic flushings of water or magnesium sulphate, drams i. in a tumblerful of hot water internally three times daily, ten minutes before meals, are both useful aids. Eclampsia is usually prevented by watching the patient carefully during her pregnancy. A blood pressure elevated but showing no signs of increasing is suggestive though not necessarily dangerous, but a blood pressure that shows a persistent step-like increase is very significant and dangerous. Again, we treat such patients with rest in bed restricted condiments, high carbohydrate, low protein, low fat diet, elimination of the bowels as mentioned, force fluids, often tepid baths once daily to promote elimination through the skin. Keep the room well ventilated. Don't forget that the blood pressure rises early and is more important than the urine in most cases, although a scanty urinary output is very significant and often dangerous.

Should the patient fail to improve, or convulsions appear, we treat the condition as follows: First, if the fetus is viable and the cervix obliterated so that an easy delivery can be completed, delivery is advisable, either by forceps or version. 25 per cent magnesium sulphate, 10cc. in the gluteal muscles and repeated in 5 cc. doses after every convulsion. Second, wash out the stomach, leaving in 50 to 100 cc. of magnesium sulphate saturated solution. Third, colonic flushing. Fourth, promote sweating either in a hot pack or with a frame of electric light bulbs suspended over the patient's body and covered with blankets, a gag between the teeth to protect the lips and tongue, head turned to one side, often lowered, face downward, so that saliva may escape freely.

In plethoric individuals 500 cc. of blood may be withdrawn and the patient given 500 cc. of 20 per cent glucose every four or five hours to promote diuresis and for its beneficial effect upon liver lesions. If the fetus is not viable, or the birth canal is not suited for a delivery from below, we treat these cases by injections of magnesium sulphate, intravenous glucose, and the eliminative measures above mentioned. In rare instances abdominal section is used, although the maternal mortality is high.

For all practical purposes the treatment of eclampsia or nephritic toxemia is practically the same. It is important to remember that the blood pressure often takes an alarming drop after delivery in certain toxemic patients; and for that reason, as well as in the individual who is none too well nourished at best, any withdrawal of blood must be carefully considered and the case selected. Certain patients with toxemia of pregnancy, early or late, are markedly benefited by blood transfusion.

The next topic I shall mention is the diagnosis and management of occipito-posterior presentations and transverse position of the head. This, in my experience, is the most common position occurring in all labors; but it nearly always corrects itself spontaneously before delivery and is not discovered early in pregnancy when it is present.

In this condition the sagittal suture of the fetal head lies in the transverse diameter of the pelvis or in one of the oblique diameters, with the small fontanel posterior. The main factor in its causation is incomplete flexion of

the head. On external examination the broad, firm plane of the back can be felt in the flank with the small parts on the opposite side more or less anteriorly. The fetal heart sounds are best heard in the flank opposite the back. The breech is felt as an indefinite mass in the fundus, where as a round, firm object, the head can be palpated more readily on the same side as the small part by dipping the fingers deeply into the pelvis just above the symphysis.

Most of these cases will deliver spontaneously if given sufficient time. On rectal or vaginal examination the sagittal suture may be felt as above mentioned, although the fontanelles are not easily felt from below and the external examination usually renders the diagnosis less difficult. When it can be felt that the small fontanel is lower than the large fontanel, there is no need for apprehension, as the lowest point in the pelvis practically always rotates anteriorly, although more time is required. Time will usually bring about the required rotation of the head during active labor, when a low forceps delivery is comparatively simple. If the rotation does not occur, it may be occasionally necessary to do the appropriate forceps operation or version. No delivery should ever be attempted until after the cervix is completely obliterated. When such a condition becomes arrested it is suggested that the attendant wait until the cervix has fully disappeared.

After one or two hours with no advance in progress of the presenting part, a forceps application may be tried by one skilled in the application of this very undesirable and often dangerous method of forceps delivery. The Kielland forceps is probably the easiest to apply in arrested transverse positions, or any forceps with which the operator may be most familiar is applied to the sides of the child's head, or obliquely behind one ear and over the outer corner of the opposite eye and the head first flexed then rotated before any traction is made, after which the forceps may be removed and reapplied, if the first application has not been satisfactory. If the occiput has already rotated posteriorly and the sagittal suture is in the midline, it is preferable to wait longer and have the case deliver spontaneously, or deliver with forceps with the occiput posteriorly, making a liberal incision in the nearest straight line between the vulval ring and the tuberosity of the ischium when

the vulva is distended to about the size of a dollar or a little larger. In case of doubt, do nothing but watchful waiting. Version is advised by some, but the time best suited for version is before the membranes rupture and the occiput has not had sufficient time to rotate forward; hence many unnecessary versions will be performed in cases that would have delivered normally if given sufficient time.

The question of prophylactic forceps, or forceps control and episiotomy, often arises. Always bear in mind that operative delivery and every vaginal examination increases the dangers to both mother and child. Do rectal examinations and limit vaginal manipulations to those cases where interference is indicated. If adequate help is available for satisfactory asepsis and repair under general narcosis, we employ episiotomy in primiparae and parous women at times where the pelvic floor is over-stretched as in cases of funnel pelvis.

When the head is visible at the outlet with the occiput anterior and the sagittal suture in midline, not making satisfactory progress the application of low or perineal forceps to control the head and a medio-lateral incision followed by immediate repair has given us a smaller percentage of fetal injuries and firmer pelvic floors after delivery than when such was not done.

In all narrow pelvic outlets measuring less than 9 cm. between the ischial tuberosities, firm pelvic floors in primiparae and often in multiparous women; also in most breech deliveries at term in primiparae and often in women with their second babies, episiotomy has been found most useful and advisable, both at the time of delivery and in its later results on both mother and child.

However, to attempt to do this sort of work in the home with no help and an anesthetic given by a relative or neighbor, makes it very difficult for the attendant to do repairs of the pelvic floor in a satisfactory manner. It is better to have a colleague give the anesthetic and often a second colleague or nurse scrub up with him and use a vaginal retractor to expose the true extent of this injury in order that a satisfactory repair may be done. Small caliber catgut has given better results in our hands than any other material. My personal preference is for No. 1 plain catgut, the fewest number of sutures that will give coaptation without constriction. These may be placed

either as a continuous suture or tied separately and they may be placed in one to three layers, depending upon the extent of the injury. Certainly, a third degree tear cannot be satisfactorily repaired unless the operator has adequate help to expose the extent of the injury, sponge away blood, a good light, and a satisfactory anesthesia. In such a case the rectal mucosa should first be sutured.

In this locality our results have been best with the running Lembert suture of No. 00 or No. 0. plain catgut, with the knot tied in the muscle tissue above the rectal wall, so that no knot comes in contact with the rectal wall. A second suture, preferably of No. 1 catgut, plain or 20-day, approximates the sphincter muscle, then the remainder of the perineal wound is closed in layers with catgut and absolutely no further treatment is given it in the way of douches, enemas, etc. When the patient shows signs of autointoxication she is given for two successive days mineral oil and then a saline purge. During the time following delivery she is kept on a diet of broth, fruit juices and strained cereal gruels, until symptoms of autointoxication disappear. We have had one patient go for twenty-three days without a defecation by following this method. Occasionally an opiate is given to produce constipation.

Breech deliveries have an infant mortality fully twice as great as head positions. This mortality can be very markedly diminished by following the following outline. First, do not touch the patient until the breech becomes visible at the vulva; second, place the patient on a table, kitchen or otherwise, with hips at the edge. Do not try to deliver in the middle of the bed or over the sides of the bed; third, a slight amount of anesthetic should be given so that the patient can still bear down and yet not feel pain; fourth, my personal preference at this time is to give 1 cc. of some pituitary preparation hypodermically; fifth, iron out the perineum with tincture of green soap, or any liquid sterile soap, and only when the posterior buttock becomes visible over the perineal margin, do an episiotomy in all such women having their first or second babies. Either the operator or an attendant makes gentle, but firm pressure over the head, in a line drawn in the axis of the canal outlet, so as to keep the head well flexed. Care must be taken not to produce an intracranial injury by pressure from above. If this method is

followed trouble is seldom caused by the after-coming head. Most difficulties arise from the attendant seizing a leg, or worse, both legs, prematurely, with the cervix not fully obliterated, making traction. The cervix strips the arms above the head, the latter become extended. The baby dies while the attendant struggles hopelessly and desperately to deliver the child before it becomes asphyxiated. If the arms should become extended it means ordinarily that the greater expulsive force has been due to traction from below, instead of being pushed from above by the contracting uterus. In such event, by slipping the index and middle fingers with the thumb along the arm as high as the elbow or higher, try to make the arm sweep the child's face. Get out the anterior arm first; if it does not come out easily, try the posterior arm. After the first arm has been delivered the child's body, grasped about the shoulders with both hands, may be rotated gently, so as to bring the second arm in the position where the first arm was delivered. This rotation often makes the arm come down over the child's face when it can be easily delivered, after which with the child's legs astride the operator's forearm, two fingers are inserted into the child's mouth. The first and third fingers of the other hand are placed over each shoulder of the child's back and the baby's body carried directly up toward the mothers' abdomen. As soon as the mouth and nose are born there is no need for great haste. The legs are grasped with one hand by the operator to keep them from slipping and with the other hand he milks the child's trachea to express any fluid that is present, wipes the child's nose and mouth, and the head is delivered leisurely. Occasionally when only the body and arms are delivered the mouth is left in the pelvic cavity; but undue traction is necessary to bring it to the vulval outlet and it may be necessary to apply forceps to the aftercoming head. In such cases the body is lifted up toward the lower abdomen of the mother and forceps applied to the aftercoming head.

The sixth topic that I shall mention is infection, the cause of most deaths connected with childbirth. With the exception of a few anerobic organisms present in the cervix, nearly all infections are carried to the patient from without inward. Hence, look upon every case with fever, rapid pulse, etc., as a case of infection, possibly a puerperal sepsis.

In your examination, make first a general physical examination to eliminate infections elsewhere in the body, such as tonsils, lungs, malaria, typhoid, and so on. Second, examine the breasts for localized areas of heat, pain, redness, swelling; compare the appearance of both breasts to see which is larger, since a deep-seated mastitis may not appear on the surface. Observe for cracked or fissured nipples, which alone are not sufficient to cause such symptoms in the absence of infection, although they are frequently the first step in a beginning mastitis. Third, examine the perineal repair for stitch abscess, or localized induration deep in the repair wound. In such cases perhaps inserting a probe into the indurated area may open a small pus pocket, or the offending stitch may be removed for drainage and symptoms quickly relieved. Fourth, get a catheterized specimen of urine and examine the centrifuged specimen under the microscope for pus. Fifth, make a rectal examination to see what may be palpated about the uterus, adnexa and connective tissues; also to feel if a sponge has been overlooked and left behind in the vagina to obstruct lochia. Sixth, if a sponge is present, remove it; if not, insert a speculum and inspect the cervix. Is it healthy, red, granulating about the cervical canal, or is it covered with a necrotic exudate? In either event, it is an exact picture of the uterine cavity. Take a smear and a culture from the uterine cavity. Seventh, do a bimanual examination and insert one finger in the uterine cavity and palpate for retained pieces of placenta, possibly a necrotic myoma, etc. Then palpate tubes, ovaries and connective tissue for extension of any inflammatory process. Eighth, consider the possibility of appendicitis or gall-bladder attack. Ninth, do a complete blood count including blood culture, with particular reference to malaria and a Widal reaction for typhoid.

Naturally such an examination is not necessary for the patient who shows some cause other than a puerperal sepsis to account for the symptoms; but if such a cause is not found very quickly, or the patient's condition becomes worse, following this outline should enable one to find the cause of the trouble.

The treatment is usually absolute quiet, ice-bag over lower abdomen, often ergot or pituitary preparations to keep the uterus well contracted, force fluids (at least 4,000 cc.

daily), and a high calorie diet. If facilities permit, place the bed out in the open air in the sunlight, preferably with only white covers to permit better passage of the ultraviolet rays of the sun. If the patient does not take sufficient food (3,000 calories daily), or fluids by mouth (4,000 cc. daily), give Ringer's solution or normal saline solution, 2,000 cc. subcutaneously, twice daily, and 20 per cent glucose, 500 cc., two or three times daily intravenously. Should improvement not appear very rapidly, or if the blood culture is positive, or the uterine smear or culture shows the presence of a streptococcus or staphylococcus, early transfusion of 500 to 1,000 cc. of blood given two or three times weekly is important. Should the patient's hemoglobin be below 70 per cent, blood transfusion is also indicated.

It is important to bear in mind that certain infections destroy red blood cells very rapidly and these must be replaced during the time that the patient is acquiring sufficient antibodies to combat the infection. In order to raise the blood count 1,000,000 blood cells it has been found necessary to transfuse 15 cc. of blood for every kilogram of body weight in the recipient. This means giving approximately 600 cc. of blood for every 100 pounds in body weight. Therefore it is often necessary to repeat transfusion frequently. In cases of severe infections we usually give 700 to 800 cc. of blood at a time and repeat as often as conditions seem to justify; ordinarily two or three times per week.

The curet is a very effective means of converting a localized infection into a generalized one. Hence, in case of doubt, the curet should be considered with extreme caution. In cases of peritonitis nothing by mouth except cracked ice, Fowler's position, Ringer's solution 2,000 cc. twice daily, at 12 noon and 6 p. m., glucose, 20 per cent, 500 cc. intravenously two or three times daily, at 9 a. m., 3 p. m., and 9 p. m. Obtain blood frequently for cultures to follow the course of the infection. Early transfusion, repeated frequently, until hemoglobin has reached 100 per cent or more. Gastric lavage and syphonization, rectal tube for gas and daily warm tap water enema. Morphine 1-6 gr. hypodermically for chill p. r. n. As soon as the process has localized, give liquid diet without milk for three days; then soft diet, and increase to high calorie diet. If process is localized, wait until fluctuation can

be felt on vaginal examination, when a cul-de-sac puncture in midline, large enough to admit two fingers, may be used to break into any areas of induration palpated, following which drainage tubes of rubber or with some temporary gauze packing are inserted.

Abdominal section for puerperal sepsis is very dangerous and if done early enough to be of value would subject to operation many patients not needing same, and if delayed until a definite diagnosis is made, its time for usefulness is past. The abdominal operation for pus tubes following childbirth is dangerous and unsatisfactory in its end results. Cul-de-sac drainage with a long period of rest in bed, forced feeding, fluids, often blood transfusion, and in the late chronic stages heat to promote absorption, have given the best results in our hands.

The seventh topic to be considered is hemorrhage. Hemorrhage occurring in the latter half of pregnancy without pain or apparent cause, is strongly suggestive of placenta previa, which is diagnosed by palpating placental tissue on vaginal examination before delivery. In such cases we feel that the sterile gauze pack is of great value until the cervix is effaced sufficiently to permit version. Bringing down one or both legs around the placenta, but not through it, is useful when the child's body acts as a tampon to control hemorrhage. We use a sterile roll of gauze dipped in saline, or a one-fourth of one per cent lysol, or one per cent mereurochrome solution.

The patient is given a general anesthetic and the cervix and lower segment of the uterus about the external os is packed tightly with gauze, following which through suitable vaginal retractors, or a speculum, the vagina is tightly packed, taking care to pack first, the sides of the vagina and later the center. If bleeding is controlled by this method the pack may be left in for eight or twelve hours. When it is removed it is often found that the cervix is sufficiently dilated to permit version. The feet of the child are grasped, either one or both. My personal preference is for one foot, since the breech plus one lower extremity is larger than the head and the latter will be less likely to cause trouble with delivery when the breech plus one leg alongside of it has first served as a dilator. Traction is made on the child's leg, or legs, to control bleeding until the buttocks appear at the vulva, following which the case is delivered as any or

dinary breech case. It is vitally important in these cases to prevent blood loss and to replace blood volume, for which blood transfusion is of greatest value. Next in importance comes intravenous glucose, 20 per cent, 500 cc. to 1,000 cc. in addition to which Ringer's solution or saline solution, 1,500 to 2,000 cc., is given subcutaneously; the foot of the bed is elevated; patient is kept warm; uterus is closely watched to make sure that contraction and retraction are maintained. Ergot or pituitary preparations are given. In cases of partial or marginal placenta previa the membranes are ruptured as soon as the placental margin is palpated, following which very little bleeding occurs and the case usually proceeds as in a normal labor. At times a rubber bag is inserted within the amniotic sac after rupture of the membranes and perhaps a one pound weight is attached, or slight traction is exerted to compress the lower bleeding segment. If after two fingers dilatation of the cervix only placental tissue can be palpated, for all practical purposes the case should be considered as a central placenta previa and dealt with as such. Immediate transfusion as soon as the diagnosis is made is often of value, and steps should be taken for giving a second transfusion immediately after delivery.

If suitable hospital facilities are available, my personal preference is for abdominal section for central placenta previa. If hospital facilities are not available, one can at least boil a sheet torn in three or four-inch strips and use it as a pack until something further can be done. If bleeding continues in spite of packing, a rubber hose tied around the abdomen just above the uterus tightly enough to obliterate the femoral pulse may aid in getting sufficient time to institute further measures, such as hospitalization, blood transfusion, intravenous glucose, etc. While waiting after packing, fluids may be given under the skin or by rectum, with the foot of the bed well elevated.

Don't forget that the patient after hemorrhage is very susceptible to infection because of lowered resistance. If one should be so unfortunate as to have a patient with placenta previa and no means of supplying fluids or packing immediately available. Kerwin advises that the cervix be grasped with forceps of some kind and pulled as near the outlet as possible and either an Ochsner hemostat or a

suture carried as high up into the base of the broad ligament on either side as close as possible to the cervix, in the hope of obliterating the uterine artery, until something further can be done (Kerwin.)

The eighth topic I wish to mention is dystocia, either from a tumor or contracted pelvis, which should have been discovered by pelvic measurements at the time of first examination or malposition of the child. If a pelvimeter is not available at the time, with the use of sterile rubber gloves a vaginal examination near term is permissible. Inserting the index and middle fingers as high in the birth canal as possible, if the promontory is reached easily the pelvis is small; if reached with difficulty the pelvis is probably normal; if unable to reach at all the pelvis usually has ample room. Then, with the patient's legs drawn well up, if all four knuckles of the hand can be inserted easily between the tuberosities of the ischium, the outlet will usually offer no great difficulty. Secondly, palpate for tumors, either bony, uterine or ovarian in origin, which will enable the attendant to recognize a condition with which he may have to deal at delivery and take appropriate measures for treatment. Third, malpositions, such as transverse, occasional brow, face or breech presentation, or the presence of a low-seated placenta may be detected, all of which are possible sources of trouble. In such cases try to correct the malpositions and be ready to deal properly with hemorrhage and shock. When such conditions are recognized in advance, try to place the patient near suitable hospital facilities, or arrange to have colleagues in sufficient number on hand at the time to deal with the case as required.

Lastly, there are certain conditions occurring in the pregnant individual which will increase the mortality of such a patient by reason of her pregnancy. It has been mentioned that the acute appendix should be removed irrespective of the pregnancy. Serious respiratory infections during pregnancy call for absolute rest in bed during the period of their activity. Labor markedly increases the death rate in influenza; hence it is advisable that the woman should *not* go into labor during acute respirations if such can be prevented. Malaria calls for the use of quinine, just as it does in the non-pregnant state, since we have never found quinine in itself causing any trouble,

but we feel that the malaria that has not had sufficient quinine treatment is a frequent cause of fetal death.

It is surprising how often the high maternal and infant death rate has been attributed to inferior knowledge and experience due to a lack of time allotted to obstetrics in teaching institutions for medical students; second, to a lack of opportunities for training obstetricians; third, to an insufficient number of obstetricians available for consultation when and where needed; fourth, to the lack of adequate opportunities for post-graduate study for practitioners to familiarize themselves with developments in obstetrics. The teaching of medical students is improving, though the methods omit much that we deem important. The underrating of the importance of the obstetrical patient, and the possibilities of trouble during delivery are so minimized by both physician and laity; that people are unwilling to pay the general practitioner enough to permit him to spend sufficient time and money in preparing himself to deal properly with these complications.

It should be possible for every county to have at least one man who would prepare himself to do obstetrics and serve as an available consultant when wanted, and his colleagues should be willing and eager to support such a man in order to have him available. He should be competent to make, or have made, necessary laboratory tests ^{by grouping} and have on hand a give blood ^{from a} ~~from a~~ number of healthy donors who have been tested, with negative Wassermann, negative history of syphilis, also negative history of asthma, hay fever, etc., so that they may be used for transfusion purposes when needed.

We are prepared in St. Louis to give a course to twenty practitioners annually, the details of which can be secured by writing to the Washington University School of Medicine, Department of Obstetrics, St. Louis, Mo.

In conclusion, I wish to thank you for your patience and if there are any questions that you care to ask now or later, I shall be glad to answer them to the best of my ability.

Slides were shown illustrating: Varieties of placenta previa; methods of packing in placenta previa to control hemorrhage; Momburg's belt; breech delivery; episiotomy and repair of perineum; mastitis; method of strapping breast and relieve engorgement; postural exercises during puerperium.

HYPOTHYROIDISM AND RELATED DISORDERS*

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According to a definition by Boothby, hypothyroidism is a constitutional disease, occurring in adults, caused by an absence or decrease of secretion of the thyroid gland, as a result of atrophy of the gland or its removal. It is sometimes called Gull's disease, who described it in 1873. Murray of Manchester, England, was the first to give a glycerin extract of sheep's thyroid to a woman in 1891, and cured her in two months. This woman lived twenty-eight years and died at seventy-four, of heart failure. On our recent tour to Europe Dr. Harvey G. Beck, a personal friend of mine, called on Professor Murray and found him both physically and mentally alert, and he enjoyed his visit with him very much.

Magnus Levy described the low basal metabolic rate in hypothyroidism, in 1893. Typical cases are much more common than is suspected and I will venture the assertion that one or two cases are observed in large clinics every week, that are undiagnosed and unsuspected. The patients go from clinic to ~~to~~ ^{to} doctor. Many of doctor to doctor due to lack of appreciation ~~these~~ ^{the} value of the metabolic rate in diagnosis. Of all diagnostic aids the presence of a decrease in the metabolic rate is probably the most significant finding. Certainly a minus ten is of more importance than a plus ten or plus fifteen reading, because I know nothing that will cause an error in a downward direction; but many things such as fear, excitement, increased respiration, ingestion of foods or stimulants, just prior to a test, may cause an increase of plus ten or fifteen per cent.

Other significant findings are: fatigability, without apparent cause; lassitude, and dry, scaly and often times eczematous skin about the elbows and below the knees, associated with a decrease or total absence of perspiration. Along with the skin changes one may notice a slight thinning of the outer margin of the eyebrows or a loss of luster of the hair of the scalp. Not infrequently women will ob-

*Read before the 54th Annual Meeting of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

serve that the hair has become brittle and breaks or splits easily and it is sparse while men may observe that the beard is not so heavy as several months previously. The majority of cases in adults occur between **forty and sixty** years of age. The condition is more frequent in women than men, in the ratio of six or seven to one. Coming as it frequently does near the climacteric, hypothyroidism may be observed and presenting symptoms of amenorrhea, dysmenorrhea, pallor as of secondary anemia, vague rheumatic pains, slight increase in weight, premature graying or falling of the hair and many other signs of an early hypothyroidism are pushed to the background, and the patient is pacified by the mere statement that she is going through the "change of life" and will be all right in a few months. In men a loss of sexual desires and powers or a spermatorrhea may be the fore-runner of a thyroid deficiency.

Although it is widely believed and taught, an increase of weight does not always become apparent until a hypothyroid condition has developed. Frequently in these early cases, the patients are thin, nervous, irritable and ~~may gain~~ weight after thyroid extract is administered. Almost always there is an ~~increase in~~ temperature is usually ~~lowered~~, and the body to 96 degrees F.). The hands and feet are cold and dry, as contrasted with the warm, moist hands and feet in the hyperthyroid cases. Colds, coryza, rhinitis and respiratory infections are common. There appears to be a lowered resistance to infections of every kind and many patients succumb to mild attacks of infectious diseases.

The pulse rate is frequently lower than normal, but does not follow the metabolic reading with the consistency found in hyperthyroid cases in which a high reading and a fast pulse are almost universally associated. In King's cases the pulse rate varied from fifty-six to ninety-eight, and averaged seventy-two in the series of thirty cases. The blood pressure is usually lowered. The blood count may show a picture similar to that seen in secondary anemia, while the leukocytes show an increase in the number of lymphocytes with a corresponding decrease in percentage of polymorphonuclear cells. A rather frequent finding is an increase in the nitrogenous elements of the blood which may suggest a nephritis when

considered along with the trace of albumin frequently present in the urine. These, however, return to normal following the administration of thyroid substance. These findings may explain the frequent association of arteriosclerosis and hypothyroidism. The reflexes are inclined to be sluggish and the mental alertness is dulled.

Hallucinations and illusions may be present, as pointed out by Beck, of Baltimore. The hallucinations and illusions were first described by Professor Murray of Manchester, England, in the chapter on "Disease of the Thyroid Gland," in volume IV of the Twentieth Century Practice of Medicine, 1901. Dr. Beck calls this the Murray syndrome.

Dr. Beck reviews 194 consecutive cases of thyroid deficiency, including mild as well as outspoken cases of hypothyroidism, in which fifty-one, or twenty-six per cent, manifested some form of hallucination of sight, and a small group, hallucinations of hearing. The most common form of hallucination is when the patient sees small animals such as mice, sometimes rats, cats or dogs running around on the floor. There were twenty-six of these cases in a series, in eighteen of which the patients complained chiefly of mice. In several of these cases cats or dogs were usually seen, but at less frequent intervals. These hallucinations are sometimes so real that the patient ~~has been known to jump on a chair to get out of the way of the mice.~~ One patient of Dr. Beck's was so annoyed ~~that she actually~~ set traps for them, and it was brought out by careful inquiry that she was not seeing mice at all, but that she was the victim of hallucinations.

Several of my patients have acknowledged that they thought they saw mice, rats or other animals; but it has been very difficult to make them acknowledge it, because many of them realize that they are but hallucinations and are sensitive about the condition.

In many other hypothyroidism cases the patients complain of intermittent sensations when walking, of a wave-like motion of the street pavement, so that they are actually obliged to sit down or lean against some object until the sensation passes off. A few of the patients hear voices calling, sometimes footsteps coming through the door way, and at other times the opening of windows. One thing brought out by Dr. Beck's investigation

is that many patients are relieved almost entirely of the hallucinations by the administration of small doses of thyroid extract.

Another feature that I want to call attention to is the association of urological lesions with hypothyroidism. In one hundred cases of hypothyroidism studied, sixteen of the patients were males and eighty-four females. The subjective symptoms noted in the order of frequency were: nocturia, pyuria, dysuria, oliguria and incontinence. Excess of bladder epithelium was the outstanding feature and pyuria ranked second, occurring in twenty-eight patients.

Just here a paragraph from Lowrence seems not amiss: "Fatigability without organic disease, diminution of renal function without nephritis, slowness of the pulse without anemia, but with lymphocytosis and subnormal temperature, call for investigation of the endocrine condition of the patient."

Diagnosis of hypothyroidism is not difficult, except in early cases, provided it enters into your diagnostic horizon. Cases are often mistaken for nephritis or jaundice, or pernicious anemia or syphilis.

We should make a constant effort to avoid such errors and this is done by making a thorough examination. The error is usually due to the sins of omission. The association of chilliness, somnolence, lassitude and other subjective sensations together with a dry skin and falling of the hair should suggest a possibility of this disease.

Treatment: The giving of thyroid extract is dangerous unless the patient is kept under careful supervision. I always start the dose at one-fourth of a grain, three times a day, increasing it one-fourth of a grain every three or four days until one grain is taken; the patient is then told to report and I take the blood pressure, count the pulse and see if there are any evidences of hyperthyroidism or it can all be given in one dose. If the pulse rate is increased the dose is usually lowered. I think it is a mistake to hasten the treatment too fast, because serious trouble may result. At the end of thirty days I usually have a basal metabolism test made, and am then guided in the amount of thyroid extract to give. Most patients do well on from one to three grains three times a day. Some require from five to seven grains three times a day before they are relieved. Many patients who

have been having symptoms for several years usually require the large dose, as is noted in case 1. If any patient is taking more than five grains of thyroid extract daily, without change in the metabolic rate, it may be well to substitute thyroxin, beginning with 5 mg. daily, and increasing it gradually. Thyroxin given subcutaneously is readily absorbed; from the intestinal tract.

Better results are sometimes secured by combining ovarian substance with thyroid in the cases occurring at or near the menopause; since, at this time, there is a deficiency in thyroid activity. The treatment is one of substitution and must be continued for months, if not indefinitely. To prevent an overstimulation in the cases not being seen frequently, it is well to instruct the patient to omit the thyroid extract one week in each month. In this way overdosage may be avoided, and if insufficient extract is being taken the patient will report back as soon as the previous symptoms begin to reappear.

The other cases are where there is a pleuro glandular condition found. Hypothyroidism and hypo-pituitarism as will be seen in the last slides and reports. In the pure hypothyroid cases the hands, ankles and wrists are involved and there is a supraclavicular padding and facial changes. In the hypopituitary cases the face is unchanged and the wrists and ankles trim, and there is a girdle obesity so well described by Engelbach.

CASE REPORTS

Case 1. Mrs. McD., came to me four years ago at the age of 31 years, complaining of slight fever, general bodily aching and coldness. Her father died of carbuncle, and her mother died of apoplexy. The patient had been operated on for appendicitis and ovarian trouble eight years previously, and she had had several curetments. She was badly constipated and extremely nervous. At this time she weighed 182 pounds. I made a diagnosis of hypothyroidism and obesity. She was given thyroid extract, which was increased from one grain to five grains, three times a day. In about three months her weight was reduced to 145 pounds, and she felt much better and I did not see her any more for two or three years.

Recently she came back to see me, complaining of slight fever, neuro-muscular pains and frequent and painful urination. Examination

of the urine showed it loaded with pus. At this time she weighed 206.5 pounds, her lips were thick, her tongue hypertrophied, she was mentally very sluggish and complained bitterly of the cold. The hair was dead and the skin had a roughened appearance. A basal metabolism test showed minus 22.

She is now taking six grains of thyroid extract three times a day, and weighs 190 pounds a reduction of 16.5 pounds in thirty days. She appears better, feels better, the frequent and painful urination has stopped and the urine examination is practically normal.

Abstract

IMMUNIZATION AGAINST DIPHTHERIA

George F. Dick and Gladys Henry Diek, Chicago (Journal A. M. A., June 8, 1929), found that diphtheria toxoid employed in the three doses recommended by Ramon immunized 94 per cent of 100 susceptible persons to the point of a negative Schick test. The five doses of toxin-antitoxin mixtures employed immunized 82 per cent of 100 persons to a negative Schick test. The results with both preparations were good; especially since the majority of persons in the series were adults, who are more difficult to immunize than children, and in most of those who showed positive Schick tests after immunization, the size and intensity of the reaction had been reduced, indicating that they had acquired considerable, if incomplete, immunity. The fact that the series given toxoid included children while those given toxin-antitoxin included no one under 17 years of age does not account for the difference in results. Exclusive of children, 93.3 per cent were completely immunized in the series given toxoid. The reaction that occurred in the young woman demonstrated to be sensitized to protein contained in veal broth appears to support Kolmer's idea that proteins in the medium employed for producing toxin may be responsible for part of the reactions that occur during the course of immunization. Since diphtheria toxoid is usually a more concentrated solution than the toxin dilutions used for toxin-antitoxin mixtures and since persons susceptible to diphtheria may be sensitized to proteins contained in the broth, it is advisable to keep the foreign protein content as low as possible in broth

used for producing toxoid. Because it does not contain any foreign serum in the form of antitoxin, the toxoid does not sensitize to horse or other serum. They conclude that diphtheria toxoid as prepared by Ramon and given in the three doses recommended by him is a better immunizing agent than 0.1 L + diphtheria toxin-antitoxin mixtures, even when five doses of the latter are given. Diphtheria toxoid may safely be employed in immunizing adults. An extra skin test to detect sensitization to the bacterial proteins in diphtheria toxoid is not necessary. If there is a marked "pseudoreaction" in the Schick test or a history of diphtheria, it is advisable to give preliminary doses of from 0.1 to 0.25 cc. of toxoid. Care should be taken that the broth employed in producing the toxoid does not contain an excessive amount of protein.

SECRET DIVISION OF FEES CONDEMNED

Section 3. It is detrimental to the public good and degrading to the profession, and therefore unprofessional, to give or to receive a commission. It is also unprofessional to divide a fee for medical advice or surgical treatment, unless the patient, or his next friend, is fully informed as to the terms of the transaction. The patient should be made to realize that a proper fee should be paid the family physician for the service he renders in determining the surgical or medical treatment suited to the condition, and in advising concerning those best qualified to render any special service that may be required by the patient.—*Principles of Medical Ethics of the American Medical Association.*

EDUCATING THE CHILD!

Note by I. W. of the Duluth Schools

A teacher of an elementary school was giving an illustrated lantern talk on birds.

The picture of a grouse was thrown on a screen with the comment that she and her mother were at one time preparing grouse for a dinner and found one whose crop was filled almost to bursting, and that she had cut the thin covering to see what was inside.

"And what do you suppose I found?" she asked.

A quick reply came from a boy of Grade IV. "A goiter."—Tonics and Sedatives. Jour. A. M. A.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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ARTICLE II.—PURPOSES OF THE SOCIETY

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Arkansas and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

Editorials

ARKANSAS BASIC SCIENCE LAW

Act No. 147—H. B. No. 506

AN ACT to establish a State board of Examiners in the basic sciences, to provide for its organization and powers, to provide that certification by such Board be a prerequisite to eligibility for examination for license to practice the healing arts; to define the healing arts, and for the better protection of the public health in the State of Arkansas.

Be it enacted by the general assembly of the State of Arkansas:

Section 1. BASIC SCIENCE CERTIFICATE REQUIRED. No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, bacteriology and pathology (hereinafter referred to as the basic sciences), issued by the State Board of Examiners in the basic sciences.

Sec. 2. THE HEALING ART DEFINED. For the purposes of this Act, any license authorizing the licentiate to offer or undertake to diagnose, treat, operate on, or prescribe for any human pain, injury, disease, deformity, or physical or mental condition is a license to practice the healing art.

Sec. 3. BOARD OF EXAMINERS IN THE BASIC SCIENCES. The Board of Examiners in the basic sciences shall consist of five persons to be appointed by the Governor, and the Superintendent of Public Instructions who shall be a member ex-officio. Every member shall serve until his successor is appointed and qualified. The members of the Board shall be selected because of their knowledge of the basic sciences aforesaid. No member of the Board shall be actively engaged in the practice of the healing art or any branch thereof. No member of the faculty of any medical school shall be eligible to appointment as a member of said Board. The members shall be appointed one for two years, one for three years, one for four years, and one for five years and one for six years from the date of their respective appointments. Upon the expiration of the term of any member, the Governor shall fill the vacancy by appointment for a term of six years. Upon the death, resignation, or removal of any member, the Governor shall fill the vacancy by appointment for the unexpired term. The Superintendent of Public Instruction shall supervise all examinations conducted by the Board, and the office of said Board shall be in the office of said Superintendent.

Sec. 4. ORGANIZATION OF BOARD; ELECTION OF OFFICERS, SEAL, RULES, COMPENSATION. The Board shall meet and organize as soon as practicable after appointment. It shall have power to elect officers, to adopt a seal, and to make such rules as it deems expedient to carry this Act into effect. The Board shall keep a record of its proceedings which shall be prima facie evidence of all matters contained therein. Each member of the Board shall receive ten dollars per diem and actual expenses, when actively engaged in the discharge of his duties. The compensation of the members and the other expenses of the Board shall be paid out of the fees received

from applicants. The treasurer of the Board shall give such bond, running in favor of the State, as the State Treasurer shall determine.

Sec. 5. FEES PAYABLE BY APPLICANTS. The fee for examination by the Board shall be ten dollars. The fee for re-examination within any twelve months period as hereinafter provided shall be five dollars, but the fee for re-examination after the expiration of twelve months shall be the same as the original fee. The fee for the issue of a certificate by authority of reciprocity, on the basis of qualifications as determined by the proper agency of some other State shall be five dollars. All fees shall be paid to the Board by the applicant at the time of filing application. The Board shall pay all money received as fees into the State Treasury, to be placed in the special fund to the credit of the Board. The Treasurer shall pay out of such fund all expenses incurred by the Board, on vouchers signed by the President and the Secretary of the Board.

Sec. 6. EXAMINATIONS. The Board shall conduct examinations at such times and places as it deems best, having due regard to the times and places of the examinations held by the several professional examining boards authorized to issue licenses to practice the healing art in the State of Arkansas. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability and skill in the basic sciences. The examination shall be conducted in writing. If the applicant receives a credit for seventy-five per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than seventy-five per cent in one subject and receives seventy-five per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, upon application and the payment of the prescribed fee; but he shall be required to be re-examined in all branches. If the applicant shall receive less than seventy-five per cent in more than one subject, he shall not be re-examined within the period of one year next following his original examination nor unless he presents proof satisfactory to the Board of additional study in the basic sciences sufficient to justify re-examination.

Sec. 7. REQUIREMENTS FOR CERTIFICATE. No certificate shall be issued by the State Board of Examiners, in the Basic Sciences, unless the person applying for a certificate submits evidence satisfactory to the Board that (1) he is not less than twenty-one (21) years of age; (2) he is a person of good moral character; (3) he was graduated by an accredited high school or similar grade or possessed education qualifications equivalent to those required for graduation by such an accredited high school, before he began the study of the basic sciences as shown by passing the examination given by the Board, as by this Act required.

Sec. 8. RECIPROCITY. The State Board of Examiners in the Basic Sciences may in its discretion waive the examination required by Section 7 when proof, satisfactory to the Board, is submitted, showing that the applicant has passed an examination in the basic sciences before a board of examiners in the basic sciences or a board authorized to issue licenses to practice the healing art, in another State, when requirements of that State are, in the opinion of the Board, not less than those provided by this Act.

The provisions of this section shall apply only to examinations conducted by the boards or of-

ficers of states that grant like exemption from examination in the basic sciences to persons now legally entitled to practice the healing art.

Sec. 9. APPEAL FROM BOARD'S DECISION. Any applicant who has been denied examination by the Board within thirty days after such denial may appeal to the circuit court for the county in which the Board has its office; and such court shall upon such appeal inquire into the cause of such denial. If in the opinion of the court admission to examination was refused without just cause, the court may order the Board to examine the applicant. Notice of an appeal from the denial of the Board of the right to examination may be served upon any member of the Board by leaving with him or with any adult member of his staff or household, at his usual place of business or abode, an attested copy thereof within thirty days after said Board has notified the applicant of its refusal to examine him. Hearing of such appeals shall proceed in accordance with such rules as the district court may determine.

Sec. 10. CERTIFICATES AND LICENSES VOID. Any basic science certificate and any license to practice the healing art or any branch thereof which is issued contrary to this Act shall be void. A Board which has issued a license by virtue of a void basic science certificate shall revoke or cancel such license. The procedure for such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued for the cancellation or revocation of licenses generally. The certificate issued to any person by the State Board of Examiners in the basic sciences shall be automatically revoked by the revocation of any license issued to such person to practice the healing art or any branch thereof.

Sec. 11. PRACTICE WITHOUT BASIC SCIENCE CERTIFICATE FORBIDDEN. Any person who shall practice the healing art or any branch thereof without having obtained a valid certificate from the State Board of Examiners in the Basic Sciences, except as otherwise authorized by this Act, shall be fined not more than one hundred dollars or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 12. FRAUDULENT CERTIFICATES FORBIDDEN. Any person who shall obtain or attempt to obtain a basic science certificate by any dishonest or fraudulent means, or who shall forge, counterfeit, or fraudulently alter any such certificate, shall be fined not more than five hundred dollars, or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 13. FRAUDULENT LICENSES FORBIDDEN. Any person who shall obtain or attempt to obtain a license to practice the healing art or any branch thereof from any board authorized to issue any such license, without presenting to said licensing board a valid certificate issued by the State Board of Examiners in the Basic Sciences, as in this act required, shall be fined not more than five hundred dollars or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 14. ISSUE OF FRAUDULENT LICENSES FORBIDDEN. Any person who knowingly issues or participates in the issue of a license to practice the healing art or any branch thereof in any person who has not presented to the licensing board a valid certificate from the State Board of Examiners in the Basic Sciences, or to any

person who has presented to such licensing board any such certificate obtained by dishonesty or fraud, or any forged or counterfeit certificate, shall be fined not more than five hundred dollars, or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 15. FEES PAID UNAUTHORIZED PRACTITIONERS RECOVERABLE. Any money paid out by any person as compensation for services rendered in the practice of the healing art or any branch thereof to any person not validly licensed to practice such healing art or branch, when the payor did not know that such person was not validly licensed so to practice, may be recoverable by the person who has paid such money by a suit instituted within two years from the date when such fee or compensation was paid.

Sec. 16. ENFORCEMENT. The State Board of Examiners in the Basic Sciences and the various boards authorized to issue licenses to practice the healing art or any branch thereof shall investigate any supposed violation of this act and report to the proper county attorney all the cases that in the judgment of such board warrant prosecution. Every police officer, sheriff and peace officer shall investigate all supposed violations of this Act and apprehend and arrest all violators thereof. It shall be the duty of the attorney general and of the several county attorneys to prosecute violations of this Act.

Sec. 17. On or before the first day of March in each year, the secretaries of the several examining boards shall certify to the Secretary of State, under the hand and seal of the President and Secretary of the particular examining board, a list of all persons registered with said board for the current year. The Secretary of each of the several examining boards of this State shall within 60 days after any examination conducted by his examining board, certify in writing to the Secretary of State a list of all persons admitted or licensed by his board to practice the healing art in this State, and whose names have not been previously certified to the Secretary of State, or any other agency, provided by law in the then current year. Within thirty days after receiving from the Secretary of the several examining boards any of the lists of persons he shall cause such list to be printed and a copy thereof to be sent to the sheriff of each county, and to the prosecuting attorney of each district, who shall keep on file in his office for the inspection of the public, such list.

Sec. 18. EXCEPTIONS. This act shall not be construed as applying to dentists, nurses, midwives, optometrists, chiropodists, barbers, cosmeticians or Christian Scientists, practicing within the limits of their respective callings; nor to other persons licensed to practice the healing art or any branch thereof in this State when this Act takes effect; nor to persons specifically permitted by law to practice without licenses, practicing within the limits of the privileges thus granted them; not to the sale, manufacture, or advertising of drugs, medicines, household remedies, chemicals and household preparations, provided that the vendor, maker or advertiser refrains from any attempt to diagnose.

Sec. 19. SAVING CLAUSE. No provision of this act shall be construed as repealing any statutory provision in force at the time of its passage with reference to the requirements governing the issuing of licenses to practice the healing art or any such branch thereof; but any board authorized to issue licenses to practice the healing art or

any branch thereof may in its discretion accept certificates issued by the Board of Examiners in the Basic Sciences in lieu of examining applicants in such sciences or may continue to examine applicants in such sciences as heretofore. The unconstitutionality of any part of this Act shall not be construed as invalidating any other part thereof.

Sec. 20. SHORT TITLE. This Act may be cited as "Basic Sciences Act, 1929."

Sec. 21. DATE OF TAKING EFFECT. This Act shall take effect and be in force from and after its passage and approval by the Governor.

Approved March 14, 1929.

Personal and News Items

THE SAMUEL D. GROSS PRIZE

Fifteen Hundred Dollars

Philadelphiá Academy of Surgery

Essays will be received in competition for the prize until January 1, 1930

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22d St., Philadelphia," on or before January 1, 1930.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

William J. Taylor, M. D.,
John H. Jopson, M. D.,
Edward B. Hodge, M. D.,
Trustees.

Philadelphia, May 20, 1929.

Dr. George B. Fletcher, Hot Springs, announces that about October 1st he will withdraw from the firm of Drs. Greene, Fletcher and Scully, and will practice medicine independently. His offices will be located in the New Medical Arts building now under construction.

The Fiftieth Annual Commencement of the University of Arkansas, School of Medicine, was held in the High School Auditorium, Little Rock, May 28, 1929. Diplomas were presented to one of the largest classes in the history of the College of Medicine. Doctor of Medicine degrees were awarded to 43 graduates, and 17 bachelor of science in medicine degrees were given to students who have finished their second year in the institution.

The annual address was delivered by the Rev. James Thomas and the invocation was given by the Rev. J. F. Lawson. Dr. J. C. Futrall, president of the university, conferred the degrees and issued the certificates.

Dr. F. Vinsonhale, Little Rock, received the honorary degree of doctor of laws from the University of Arkansas at its recent commencement exercises.

Governor Parnell has appointed the following members on the State Medical Examining Board: Dr. Sam J. Allbright of Searey, to succeed himself; Dr. W. H. Moek of Prairie Grove, to succeed Dr. J. W. Walker; Dr. W. T. Lowe of Pine Bluff, to succeed Dr. J. T. Palmer, and Dr. A. S. Buchanan of Prescott, to succeed Dr. H. A. Ross. The other members of the board, whose terms will not expire until April 1, 1931, are Dr. W. W. York of Ashdown; Dr. W. A. Montgomery of Atkins, and Dr. W. W. Verser of Harrisburg.

The White County Medical Society met recently in Center Hill, at the home of Dr. and Mrs. F. P. Hardy, who entertained the members with a dinner. Dr. D. W. Sloan of Beebe is president of the society.

Dr. R. L. Smith of Russellville was appointed by Governor Parnell as a member of the Board of Trustees of the Arkansas Polytechnic College at Russellville. The appointment is for ten years.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society held its May meeting in Bentonville.

Present: Wilson, Scott, Lindsey, Love, Moore, Duckworth, Harrison, Eubanks, Clemmer, Hughes, Highfill, Duncan, Wharton, Powell, Greene, Atkinson. Drs. Grantham and Pickens were visitors.

Dr. S. A. Grantham of Joplin, Missouri, presented a paper entitled "Surgery of Long Bones and Fractures Near Joints." A vote of appreciation was given Dr. Grantham, following the delivery of his subject.

Application for membership by Dr. E. A. Pickens of Bentonville was referred to the Board of Censors.

Obituary

OVERTON, F. S.—Mr. F. S. Overton, Little Rock, died June 16, 1929. Aged 73. Mr. Overton was well known to the majority of our members, having served as assistant to the Secretary of the Arkansas Medical Society for many years, and was formerly registrar of the School of Medicine, University of Arkansas.

He is survived by his widow, six daughters, the Misses Emma, Sadie and Maggie May, all of Little Rock; Miss Maude Overton of New York; Mrs. L. F. Plemmons of Magazine; Mrs. Arthur Wilson of Birmingham; a son, George T. Overton of Little Rock, and three grandchildren.

Book Reviews

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume 8, number 2. (New York Number, April, 1928), 256 pages with 90 illustrations. Per Clinic year (February, 1928 to December, 1928.) Paper \$12.00; Cloth, \$16.00. Published by W. B. Saunders Company, Philadelphia.

Clinics from the following New York hospitals are represented: No. 1, Clinic of Dr. John F. Erdmann, New York Post-Graduate Medical School and Hospital. No. 2, Clinic of Dr. Howard Lilienthal, Private Pavilion, Mt. Sinai Hospital. No. 3, Clinic of Dr. Winfield Scott Pugh, City Hospital. No. 4, Clinic of Dr. Guilford S. Dudley, Bellevue Hospital. No. 5, Clinic of Dr. Julius Gottesman, from the Surgical Service, Montefiore Hospital. No. 6, Clinic of Drs. Ralph Colp and Robert T. Findlay, from the Surgical Service of the Beckman Street Hospital.

Syphilis.—A Treatise on Etiology, Pathology, Symptomatology, Diagnosis, Prognosis, Prophylaxis, and Treatment. By Henry H. Hazen, A. M., M. D., Professor of Dermatology and Syphilology, Medical Department of Georgetown University; Professor of Dermatology and Syphilology, Medical Department of Howard University; Member of American Dermatological Association. Second Edition. With 165 illustrations, including 16 figures in colors. Published by The C. V. Mosby Company, St. Louis. Price, \$10.00.

The chapters upon Occurrence and Economic Importance, Syphilis of the Nervous System, Diagnosis, Prophylaxis, and Treatment have been entirely re-written, and presents the facts that are known at the present time.

The Duodenum.—Medical, Radiologic and Surgical Studies. By Pierre Duval, Jean Charles Roux and Henri Beclere of the Surgical Clinic, Faculty of Medicine, Paris. Translated by E. P. Quain, M. D. Published by The C. V. Mosby Company, St. Louis. Price, \$5.00.

The most interesting part of this book is the discussion and demonstration of a number of pathologic conditions of the duodenum which heretofore have received but slight recognition in medical literature. Nearly all our textbooks, as well as the innumerable articles dealing with duodenal lesions in our medical journals, leave the impression that ulcer is the all important and almost sole pathologic condition of the duodenum requiring serious consideration. The authors of this book show that this assumption is not true. There are other lesions of the duodenum, due to congenital predispositions, which are nearly as dan-

gerous to life, equally disabling, and perhaps more prevalent even than ulcer. There are reasons for believing that the cause of certain duodenal ulcers may be found among these other lesions.

A Handbook of Clinical Gynecology and Obstetrics.—By Rae Thornton La Vake, A. B., M. D., F. A. C. S., Assistant Professor of Obstetrics and Gynecology, University of Minnesota. Illustrated. Published by The C. V. Mosby Company, St. Louis. Price, \$4.00.

In the first part of the volume, the author presents a cross-section of the problems of a gynecologic and obstetric clinic or office practice with methods of diagnosis and treatment that in his practice that has proved to be most efficient.

The second part of this volume aims to give a view of obstetric problems arranged according to their relative importance.


A Manual of the Practice of Medicine.—By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Twelfth edition, Revised. 12mo of 657 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, \$3.50 net.

This popular book has reached its 12th edition and well deserves its splendid reputation. New material has been added and many chapters have been thoroughly revised.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1927, Volume XIX.—Edited by Mrs. M. H. Mellish and H. Burton Logie, M. D. Octavo volume of 1330 pages with 412 illustrations. Published by W. B. Saunders Company. Cloth, \$13.00 net.

This volume presents selected articles written by members of the staffs of the Mayo Clinic.

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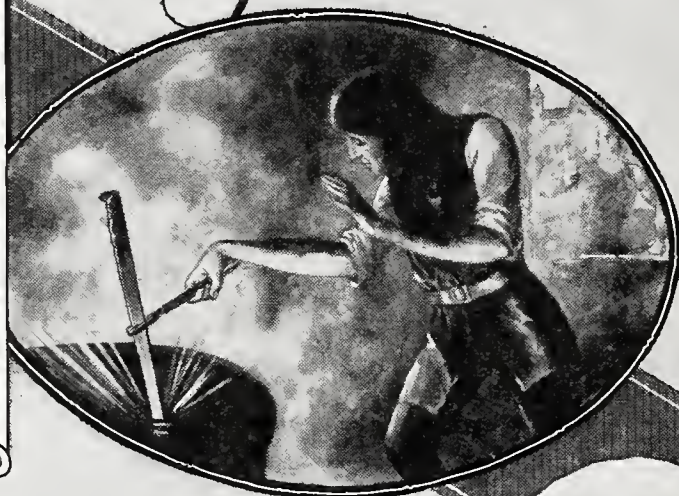
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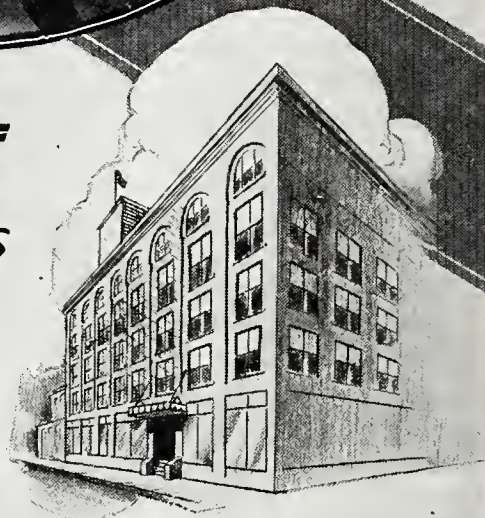
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No. 2

Original Articles

ANNUAL ADDRESS*

R. II. T. MANN, M. D., Texarkana

To the Members of the Arkansas Medical Society.

Ladies and Gentlemen:

I deeply appreciate the honor you have conferred on me by having elected me your President. I have tried to realize fully the responsibilities going with this office and fulfill them to the best of my ability.

Last winter when we were in that terrific fight trying to have our Basic Science Bill enacted into a law, I told our Secretary that we would either attend the Hot Springs meeting as a banquet or a funeral. Well, thanks to the untiring efforts of the Legislative Committee and the splendid response from the profession of the State, and the efforts of our Attorney, Mr. Peter Deisch, it is not our funeral.

It has been more than thirty years since I first attended a meeting of this Society and presented my first paper. There is one thing about that meeting I shall never forget. My knees got to shaking and I wondered if I would ever finish reading the first page. Many things have happened since that time. Most of the men who were in attendance at that meeting are with us no more. A fine body of men enduring the hardships of that time and laying the foundation for this wonderful age in medicine in which we are now living.

Future historians of medicine may write of this period as the Golden Age of Medicine, not alone describing some rich sick man with a pot of gold chasing across the Continent to

this or that clinic, but because of the great scientific discoveries which have been made, the results of which have been lengthening the span of human life in this country from 49 to over 56 years, and the full results of those discoveries have not yet been fully realized by all our people.

It has been hard indeed through this changing period for the members of our profession to keep fully abreast with these discoveries, because many pseudo discoveries were brought forward, and then, too, the medical education was far below what it now is.

When one reviews the very rapid advances which have taken place in medicine during these years, one cannot help being amazed at the progress many of our older physicians have made, in spite of the handicaps of a very limited literary education, very poor medical education and no hospital experience such as has been enjoyed by many of you younger men, my! what wonderful physicians and surgeons you ought to be some day if you apply yourselves as these men have done.

If you only realize that the knowledge you have already attained is but the beginning of your growth in medicine and furthermore your usefulness to your community will be an indirect ratio to the advancement you make in the future. Mark my words. If you do not attend many society meetings, take frequent graduate courses and read the latest medical journals, you will be no exception to the rule, but will be nursing an empty office before you are sixty years old.

We hear very much about the high cost of medical service today. Medical service, when measured by results, is cheaper today than it has ever been before in the history of the world, and the results are far more satisfactory. Many common and expensive diseases have almost disappeared, such as Yellow Fever, Malaria, Typhoid Fever and kindred diseases, while many others which formerly

*President's Address, read before the Fifty-fourth Annual Session, Arkansas Medical Society, Hot Springs, May 7, 8, 9, 1929.

were treated over long periods, being relieved but not cured, are now cured when the cause is found. I am referring to patients suffering from iritis, rheumatism and kindred diseases. These patients, in many cases, make complete recoveries.

We are living in an age of co-operation and specialization, and this should be applied to medicine as well as any other line of endeavor. This is being done to a limited extent, both in small towns as well as in larger cities. Where these groups are properly organized, it results in much good to the communities. The physicians must co-operate, advance and improve with the age by using modern methods and appliances, or the State will be forced to do it to them.

I think that the Legislative Committee should be changed to an executive committee, composed of six members, with terms of six years, to run consecutively, and in this way they would always have a working knowledge of the needs of the Society. This Committee should be able to work out many of the pressing problems of our society without in any way interfering with the action of the Council. There will always be questions coming up for solution, and they can only be settled by the best brains in our Society, and perhaps the best brains that the members of this committee can borrow. Let me illustrate what I am trying to say—take, for instance, the question of industrial practice. No man, or small group of men, can settle this alone. I think that these problems should be referred to the executive committee if one is created.

No other profession is expanding like medicine, and there is plenty for every physician in the State to do. As an illustration, a blood Wassermann on all our colored population would not be amiss, and many of the white population stand sadly in need of it.

We have a very efficient Health Department, due to the efforts of Dr. Garrison. The physicians over the State should do everything possible to assist him in his work.

I do not believe the mass of our population has ever realized the importance of medical education, nor have they been willing to provide the equipment necessary to adequately care for the unfortunate sick of the State. Take the case of our own State. There is no general hospital in the State where our poor, unfortunate sick, without means, can go for treatment, it matters not how urgent may be

the need. No doubt, many patients die each year whose lives could have been saved if modern hospital facilities were placed at their disposal; yet, when the needs of a State General Hospital is presented to a member of the Legislature, he says, "I am for it if only the money can be found."

We find money by the millions for State highways, money for tick eradication and what not, but cannot find one cent for the care of the unfortunate poor of our State. It is mere folly to try to induce people from a distance to move in among us and develop our industrial State when we are doing so little to conserve the lives of our present population. No amount of money, either from private sources or taxation, can be better invested than in trying to make Arkansas the healthiest place on this continent in which to live. Mark my words, the Arkansas Legislature will find the funds for needed health legislation when asked in the right way by our profession.

When a State General Hospital has been established in Little Rock in connection with the medical department of the University of Arkansas, all the State controlled medical activities should be grouped around the medical school for by so doing, the students would indeed have such wonderful clinical advantages.

The medical school should be made the pride of our entire State, and it could be with only a small added tax, and that tax would be the best investment ever made in this State, making sick poor people well.

While we are trying to build factories, why not build a medical brain factory. The people would begin to say that some good could come even from Arkansas.

A few years ago I read a paper before a convention. Some one in discussing the paper said, "we always thought nothing good could come from Arkansas, but we have just heard a good paper from that State."

It is perhaps more important that graduate courses be given in the medical school than under-graduate. By far, the larger number of our physicians are progressive and keep fully abreast with the times, but unfortunately we have many who are not progressive. They have no time for society meetings, no time for graduate work. They reside both in the country, towns and cities. They constitute, perhaps, the greatest handicap in the profession, facing old age with no means and a diminishing practice. They remind one of a farmer

who expects to always milk a cow and never feed her any.

All medical State controlled institutions should be the child of the Arkansas Medical Society. The Ladies Auxiliary should inspect these institutions, make recommendations for their improvement and generally look after the sick of our State.

The Arkansas Medical Society should at all times exhort every ounce of its energy in every way in making better doctors of its members, and in every other way helping to improve the health of the people of the State.

In conclusion, I hope the Arkansas Medical Society with its more than 1,200 members will never lose sight of the main object of its existence, that is, to preserve the health and happiness of the nearly two million people residing within its confines. It matters not what else its attainments may be if it fails in this great objective, its existence will have been in vain.

Abstract

RHEUMATIC FEVER

Homer F. Swift, New York (Journal A. M. A., June 22, 1929), discusses the meaning and scope of the term rheumatic fever, the different types of infection, the visceral manifestations of rheumatic fever, the histologic characteristics of the disease, the nature of rheumatic valvulitis, the factors in etiology, the etiologic role of streptococci and the allergic theory. He stresses the fact that the so-called allergic theory does not establish unequivocally the etiologic role of streptococci in rheumatic fever, but only furnishes the best explanation of how the different strains could all induce a similar clinical and microscopic picture. It also furnishes a hypothesis for continued investigation of the disease, from which further advances may be anticipated. The observation that intravenous inoculation of rabbits altered the hypersensitiveness to a hyposensitive or immune state has led to the treatment

of patients with intravenous injections of relatively small doses of streptococcus vaccines or nucleoproteins; and following properly regulated doses has been observed a constantly diminishing febrile response and in several cases a decreasing cutaneous reactivity after the treatments. In many of the patients there have been a corresponding improvement in the general condition, but whether this was due to the treatments or was a natural evolution of their infection it is difficult to affirm. The evaluation of therapeutic measures in patients with rheumatic fever is one of the most difficult problems in medicine. This is due to the fact that in most instances there is a tendency to recovery, temporarily, at least, and it is difficult in any single case to judge when this will occur or at what rate it will proceed. Because of the marked tendency to relapses in the acute forms of the infection and the liability to recurrences in patients who have once had the disease, it is probable that if in a group of individuals any form of treatment eliminated these relapses and recurrences as compared with a like number of untreated controls, it might be stated with a fair degree of certainty that the treatments had been of value. In the meantime, investigation must proceed with certain hypotheses based on as exact experimental work in animals as can be devised. Up to the present the methods at our disposal of decreasing the hypersensitiveness of infection are (1) stopping the production of new foci of infection; (2) elimination of foci already present, and (3) intravenous desensitization or immunization with suitable antigenic substances. The eradication of infected tonsils and teeth has been a standard of treatment. While apparently brilliant results follow this treatment in certain cases, in others they are disappointing, perhaps because of the impossibility of eliminating all such foci. It appears, then, that an important problem is to devise some method of building up the immunity so that the liability to renewed infection will be lessened, or if new infection occurs the reactivity of the tissue will approximate that of immunity without hypersensitiveness.

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OF THE

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WILLIAM R. BATHURST, Editor
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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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ARTICLE II.—PURPOSES OF THE SOCIETY

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Arkansas and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

Editorial

OUR NEW PRESIDENT

Dr. Thad Cothorn of Jonesboro, chosen President-Elect at the El Dorado meeting in 1928, was advanced to the presidency of the Arkansas Medical Society at the Hot Springs meeting in May of this year.

Dr. Cothorn belongs to a type fast disappearing, but a type which forms the very backbone of the sturdy American. Born at Walcott, July 27, 1880, of pioneer stock, his parents having migrated from the Atlantic Coastal plains of the Carolinas and Georgia. His early life was of the kind about which the younger generation reads but of which it knows nothing by personal touch. As a boy, his home was twelve miles from the nearest railway; the home was almost surrounded by virginal forest, he learned to milk the cows, to chop wood for the cook stove and hearth, went to school for a few weeks in the year, laid snares for rabbits, on rare occasions, went to town with his parents, and lived the life of the farm boy, as his neighbors had before him.

The automobile, the radio, good roads, the increase in country newspapers, and various other factors, which have brought the whole people into closer touch with each other, have changed all this; but the fact remains that this was the life and environment which have made a strong, self-reliant, native race.

As in the case of many successful men, it was young Cothorn's mother who planted in the boy the seeds of ambition and a desire to get away from the sphere in which he was born. Like many other country lads, he relieved lonely nights by reading. What newspapers his father took were read and re-read, and an autobiography of Benjamin Franklin became a sort of bible to him, and no better incentive to ambition and effort could have been afforded him than the strenuous experiences of the young Franklin and his final conquering of adverse circumstances. And, so, at the age of 17 years, he fared forth "on his own." He went to Paragould, where he attended the Thompson Classical Institute, conducted by Professors R. S. Thompson and the late George R. Hopkins, long beloved educator of Little Rock. Here his farm training and his own ambition stood him in good stead. He milked the cows of the Hopkins home. Kept the barn and sheds clean and did other

chores as part payment of his tuition, the rest to be paid when able. The boy advanced. Presently, he became a substitute teacher and finally emerged with a B. S. degree. The next step was to get a medical education. He taught school, worked in lumber camps, clerked in stores, did any and everything which he could get to do to earn money. Then he entered the Hospital Medical College at Memphis. All of this suffices to show of what metal Dr. Cothorn is made. His life is an inspiration to youth. It is not necessary to go further into details. After being licensed to practice he returned to Walcott. He maintained an office between terms of school and by the time he graduated in medicine he already had a practice.

After moving to Jonesboro, Dr. Cothorn, in 1908, went to Chicago for a post-graduate medical course.

He joined the Greene County Medical Society, and after moving to Jonesboro, transferred his membership to Craighead County. In 1909, he attended the Arkansas Medical Society's annual meeting, and since then in the State Society and in his County organization he has been a consistent worker for organized medicine.

When the call to arms came, he tried to enlist but at first was rejected because of overweight. He was rejected four times, but persisted and finally was accepted and was assigned to the medical department of the 43d Infantry. He was given a Captain's commission, and after the war was over, was commissioned a Captain in the Medical Reserve Corps. Later, he was advanced to Major, which grade he still holds. He has served as Councilor of the State Medical Society and as a member of the State Board of Medical Examiners.

With such a background, with such early training, with such outstanding quality of persistency, and in the very prime of life, still under 50 years, what may not be expected of him as president of the Arkansas Medical Society?

Abstract

POTASSIUM PERMANGANATE IN THE TREATMENT OF PNEUMONIA

By JOHN L. CHESTER, M. D., Detroit, Mich.

Abstract of original article appearing in *The Annals of Internal Medicine*, published by

The American College of Physicians.

Vol. 2, No. 11. May, 1929.

Dr. John L. Chester of Detroit, Mich. reports on a series of cases of lobar and broncho pneumonia which he has been treating by standard solutions of Potassium Permanganate. Giving 3 to 5 ounces every 3 or 4 hours for a period of 8 to 10 days, as retained enemas, injection being by means of a funnel and catheter, he claims a lower death incidence, earlier abolition of symptoms, and convalescence attained in a shorter period of time than would have been believed possible by more orthodox treatment.

In his first series of cases, 23 treated at Providence Hospital, Detroit, there were only two deaths. At Eloise Hospital, which is maintained by the local Poor Commission, Dr. Chester selected 20 very severe cases, all complicated, most of them with chronic heart conditions of long standing, and nearly all admitting to chronic alcoholism. He treated ten of them by other than the Potassium Permanganate method, and all died. The remaining ten received the solution in varying amounts, with the result that there were 50 per cent recoveries.

Concise histories, and progress notes in all the cases originally treated by Dr. Chester are included in his paper. He also reviews the chemical action of the drug explains its method of preparation in solution, and outlines the appropriate mode of administration. Although he does not claim that Potassium Permanganate is a proved specific against the micro-organisms of pneumonia, he makes a plea for widespread interest in this new therapy, to the end that by further experimentation and observation, a directed verdict as to its real efficiency may be arrived at.

To date there is apparently no record of the exposition of Potassium Permanganate in pneumonic conditions in American Medical literature. As long ago as 1924, it had been so used in England, and becoming cognizant of this fact, Dr. Chester began his experiments, with the results above stated. The British Medical Journal of March 7, 1925, and March 12, 1927, contains reports on the work done by two English physicians, Dr. Herbert W. Nott of Birkenhead, and Dr. Nelson J. Roche of Southsea, along similar lines. It may be stated that the results obtained by Dr. Chester are quite in conformity with the satisfactory reports in the English cases.

Personal and News Items

Through the courtesy of Dr. and Mrs. A. C. Shipp the members of the Pulaski County Medical Society enjoyed their annual picnic at Fern Cliff Springs, Monday, June 24th. The weather was ideal for the occasion and a large number enjoyed the swimming and outdoor sports.

Dr. L. M. Lile, Hope, and Dr. and Mrs. O. R. Kelly, Sheridan, were recent visitors to Little Rock.

Dr. L. V. Parmley, industrial surgeon at Jerome, has moved to Little Rock with offices in the Federal Bank and Trust Company building. He will limit his practice to Traumatic and Reconstruction surgery.

At a meeting of the Board of Medical Examiners of the Arkansas Medical Society held in Little Rock, June 17, the following officers were elected:

President, W. A. Montgomery, Atkins; Vice-President, W. W. Verser, Harrisburg; Secretary-Treasurer, Sam J. Allbright, Searcy.

Laman Gray, son of Dr. and Mrs. F. A. Gray of Batesville, returned May 1st from Baltimore where he has been attending the Medical Department, Johns Hopkins University.

Dr. O. J. T. Johnston, Batesville, returned from the May Clinic, June 11, where he had been taking special work in surgery.

Dr. M. S. Craig, Batesville, spent the month of March in western and southern Texas, on his vacation.

Dr. C. L. McNeil of Rogers was a recent visitor in Little Rock.

The Arkansas Legislature created a permanent commission of five persons to provide for the rehabilitation and education of crippled children. The act was not accompanied by any appropriation but has a provision which will in time furnish funds from a permissible tax levy, part of which will be spent by the counties and part by the Commission. The Commission is authorized to conduct local surveys, arranged for diagnostic clinics, contract for medical and surgical care and for the education of crippled children.

We wish to quote the following item from the Journal of the American Osteopathic Association. 28:699 (May), 1929:

"The basic science bill is the most difficult legislation that has ever confronted our profession, for it appeals to disinterested minds and seems absolutely fair to all concerned. No telling arguments in opposition have as yet been produced.

"The danger hidden in this form of legislation is the administrative feature, for if the personnel of the board is inclined to become unfair, it is an easy matter to inflict hardships on the applicants for license.

"If the basic science bill cannot be defeated in the States, every effort should be made to secure representation on the Board of the Basic Science Examiners in all States where such legislation is proposed."

Governor Harvey Parnell announces the following appointments that constitute the first Basic Science Board. For the term of two years, E. L. Whitsett, dean of the First District Agricultural and Mechanical College, Jonesboro; S. C. Dellinger, professor of Zoology at the University of Arkansas, Fayetteville, for a term of three years; M. J. McHenry, instructor in chemistry at Hendrix College, Conway, for a term of four years; D. A. Spessard, instructor in science at Ouachita College, Arkadelphia, for a term of five years; Louis E. Gebauer, Little Rock, for a term of six years.

The board will meet soon to organize and decide on its officers and the subject for each member. The law defines the basic sciences as anatomy, physiology, chemistry, bacteriology and pathology. The Supt. of Public Instruction, Mr. J. P. Womack, is an exofficio member of the board.

PRESIDENT HOOVER AWARDS
GORGAS ESSAY PRIZE TO AN
ARKANSAS GIRL

President Hoover on May 23d awarded the Charles R. Walgreen prize of \$500 for the best essay on "The Life and Achievements of William Crawford Gorgas and Their Relation to Our Health" to Gertrude Carter Stockard, Mountainburg, Crawford County, Arkansas.

The Essay Contest, conducted under the auspices of the Gorgas Memorial Institute, was nation wide in its scope, and participated in by one out of every 100 junior and senior high school students, and by 34 States of the Union.

AWARDS

1st Prize, \$500 in cash and \$250 traveling expenses to Gertrude Carter Stockard, Mountainburg, Crawford County, Arkansas; 2nd prize, \$150 in cash, to Marguerite Hastings, Watertown, Middlesex County, Massachusetts; Honorable mention to William Gammage, Meridian, Mississippi; Alethea Whitney, Tampa, Florida; Eleanor Gilbert, Torrington, Connecticut.

OBJECTS OF THE GORGAS MEMORIAL

1. Eliminate unnecessary illness.
2. Prolong life, make it healthier, more productive, and enjoyable.
3. Check many diseases before they reach the incurable state.
4. Eradicate tropical diseases, open up territories of unlimited wealth and add enormously to the world's assets.
5. Eradicate pestiferous and disease-bearing mosquitoes (malaria alone exacts an annual toll of \$100,000,000).

6. Build up the 25,000,000 youths and adults in the United States now physically below par.

7. Lay the foundation for healthier future generations.

8. Have every individual submit to a periodic health examination by his family physician, who should be the custodian of health.

9. Prevent disease, and thereby—

- a. Relieve the nation of \$1,500,000,000 of its annual sick bill.
- b. Prevent the present annual loss of 350,000,000 hours of time caused by preventable illness of 42,000,000 employees.
- c. Save the \$3,000,000,000 lost annually through reduced earning power.
- d. Save 750,000 lives annually.

10. Bring about a liaison between the public and the scientific medical and dental professions, the real health authorities.

11. Free all the world from preventable disease, to which purpose the life of Gorgas was consecrated.

(Editors Note: The Arkansas Medical Society extends to Miss Stockard our congratulations upon this achievement.)

THE FUTURE OF SURGERY

In a survey of the future of surgery, Lewis Hugh McKinnic, Colorado Springs, Colo. (Journal A. M. A., April 6, 1929) asserts that men imperfectly qualified, even assuming a liberal standard, are doing surgery in every community. Students, under present conditions, cannot be adequately trained for the diverse activities that they will inevitably assume after graduation. The public is not safeguarded by the present diploma from a medical school, however well accredited it may be, since it seems to imply special qualifications as a surgeon or specialist, which it cannot guarantee. The financial burdens devolving on the surgeon-to-be are so heavy that they seriously impede adequate training. He says the growing strength of the university and its ascendancy in medical education suggests: (1) the graduate school of medicine as the coming standard; (2) the separation of the special fields of medicine prior to the granting of degrees, and (3) university supervision of post-graduate study leading to a special degree.

REPORT OF THE
FIFTH ANNUAL SESSION
OF THE
WOMAN'S AUXILIARY
OF THE
Arkansas Medical Society

Held in Hot Springs
May 7, 8, 9, 1929

On Tuesday, May 7th, an executive board meeting was held at the Arlington Hotel. Mrs. T. G. Porter presiding.

The first general business session was called to order at 2:00 P. M. by the President, Mrs. T. G. Porter. Rev. W. C. Watson gave the invocation, after which followed the address of welcome by Mrs. Grayson Tarkington, and was responded to by Mrs. W. F. Smith of Little Rock.

Dr. R. H. T. Mann, President of the Arkansas Medical Society, addressed the Auxiliary on "Woman's Power in a New Age."

Minutes of 1928 meeting and subsequent board meetings were read and approved, followed by reports of officers and committees.

The Memorial session was held Wednesday, May 8th, at 8:30 A. M., in the First Presbyterian Church, in joint session with the Arkansas Medical Society (See complete report Page 48 this issue).

At 10:00 a. m. the regular business session was called to order by Mrs. Porter. The reports of Committees were continued, followed by reports of County Auxiliaries. Mrs. D. A. Rhinehart gave a report of the Woman's Auxiliary of the American Medical Association for Mrs. C. W. Garrison, who was absent. Mrs. Wm. R. Bathurst gave a report of the Woman's Auxiliary of the Southern Medical Association. Report of the Resolutions committee was made by Mrs. T. M. Fly, Chairman.

Report of the Nominating committee was read, and after receiving other nominations from the floor the following election of officers was held:

President: Mrs. C. G. Hinkle, Batesville.

President-Elect: Mrs. C. E. Oates, Little Rock.

Vice-President: Mrs. W. R. Brooksher, Jr., Fort Smith.

Secretary: Mrs. O. J. T. Johnston, Batesville.

Publicity Secretary: Mrs. G. D. Murphy, El Dorado.

Treasurer: Mrs. B. A. Rhinehart, Little Rock.

Historian: Mrs. C. W. Garrison, Little Rock.

Parliamentarian: Mrs. W. V. Laws, Hot Springs.

Directors: Mrs. J. B. Wharton, El Dorado; Mrs. S. A. Drennen, Stuttgart; Mrs. J. C. Cunningham, Little Rock; Mrs. Grayson Tarkington, Hot Springs.

A beautifully appointed luncheon was served at the Arlington Hotel at 1:00 o'clock. Mrs. C. T. Drennen very ably presided as toast mistress. Mrs. Porter's address was enjoyed, after which she introduced Mrs. C. G. Hinkle, President for 1929-1930, who made a most delightful talk on the plans for the coming year.

Thursday at 1:00 P. M., the delegates and visiting ladies were entertained at luncheon at the Country Club.



THAD COTHERN, M. D.

Jonesboro

President Arkansas Medical Society, 1929-1930

PROCEEDINGS
OF THE
FIFTY-FOURTH ANNUAL SESSION
OF THE
Arkansas Medical Society

HOT SPRINGS, MAY 7, 8, 9, 1929

HOUSE OF DELEGATES

First Day—Tuesday, May 7, 1929

The House of Delegates was called to order at 9:30 a. m. by the President, Dr. R. H. T. Mann.

The Chairman: We will pass over the appointment of a Credentials Committee unless we have a contest of some kind. The Secretary says everything is in proper form, so we will ask him to call the roll of the delegates.

The Secretary: I have signed attendance cards from a majority of the delegates that have registered and to conserve time I recommend that it take the place of the roll call. My motion is that these cards take the place of a roll call.

Motion carried, on being seconded.

On motion, the minutes of the Fifty-third Annual meeting as published in the July, 1928, issue of the Journal were adopted.

The Secretary: The next order of business is the President's address to the House of delegates. In the absence of the Vice-President, I will present Dr. Mann, who will now talk to you.

House of Delegates Arkansas Medical Society:

The year has marked much progress of organized medicine in the State due to the enactment of the Basic Science Law. The credit for this splendid piece of work is due largely to Dr. Frank Vinsonhale for his canvass of the entire State, as well as his unfailing efforts during the session of the Legislature. Drs. Norwood and Bathurst also deserve much credit for their untiring effort in securing the passage of this bill.

The Society was very fortunate indeed in securing the services of the Hon. Peter Deiseh as its legal adviser. His services have been indispensable. Last, but not least, the response from the profession over the entire State was wonderful.

I, personally, feel that the physicians of the State, through our Society, should be able in the future to have enacted without much trouble any health laws for the benefit of the entire State, if only they use their influence wisely and judiciously.

I also want to thank the Council for rendering all the financial assistance necessary for the passage of this law.

It seems to me that certain changes should be made in the organization of the Society, turning it more from a political to a business organization. It might not be a bad idea if the Legislative Committee were changed into an Executive Committee, to be named by the President with the consent of the Council. This Committee should consist of six or eight members whose term of office should run six years each; however, letting the term of office of two members expire every two years. This would always keep a stable committee. This committee should be composed of the best business brains of our Society, and be free from politics. It should not in any sense interfere with the duties of the Council. The best medical brains in this State should be constantly looking after our interest and the health and happiness of our nearly two million people.

I wish to commend our very efficient Health Department. We were disappointed in not securing the passage of a bill creating a State General Hospital, to be operated in connec-

tion with the Medical College. It is to be hoped such a bill can be passed at the next session of the Legislature establishing this hospital.

All the medical activities of the State should be under the care and direction of our Society. To the Ladies Auxiliary should be referred the inspection and supervision of all State controlled medical institutions. It seems to me they are especially fitted for just such work.

Thanking you for your kind consideration, I am

Respectfully,

R. H. T. Mann, M. D., F. A. C. S.,
Texarkana, Arkansas.

The Secretary: You have just heard the President's recommendations to the House. His address will be referred to the Reference Committee consisting of Dr. Kosminsky of Texarkana, Dr. Proctor of Hot Springs and Dr. McCaskill of Little Rock.

The Chairman: The next is the introduction of visitors and fraternal delegates. Dr. Patterson of Rosedale, Miss., and Dr. Gower, of Shreveport, La.

Dr. Patterson: Gentlemen: I greet you in the name of the Mississippi State Medical Association. I extend to you the right hand of fellowship and good will and with it the wish that this meeting may be numbered as one crowned with success by harvesting the experiences of our associates. I wonder if we cannot sometimes get closer together to build up our fraternities and brotherhood and bring ourselves nearer to each other for the benefit of the general public, and feel more at home through visiting each association oftener than we do. I think this is the first time I have been to a meeting in Arkansas, and I live right across the river. I have treated many Arkansas people on Big Island up the Arkansas River that come into Rosedale.

It gives me pleasure to be with you and to extend to you a very hearty invitation to attend the Mississippi State Medical Association that will meet May 14th at Gulfport, and I hope some of you will be able to attend. I think we can show you a good time down there and that we can increase our fraternal feelings a little bit more. I thank you.

The Secretary: I move that we extend the hand of fellowship and good will to our fraternal delegates and extend to them all the

privileges of our members during the entire meeting.

Seconded. Carried.

The following telegrams were read:

Birmingham, Ala., May 8, 1929.

Arkansas State Medical Society, In Annual Meeting, Assembled Arlington Hotel, Hot Springs, Ark.

Greetings and best wishes for a most enjoyable and successful meeting.

SOUTHERN MEDICAL ASSOCIATION
Des Moines, Iowa, May 9, 1929.

Wm. R. Bathurst, Secretary,
Arkansas Medical Society

The Iowa State Medical Society in the Seventy-Eighth Annual Session convened, sends greetings to her sister State, Arkansas, and wishes for her medical profession a successful and profitable meeting.

TOM B. THROCKMORTON, M. D.,
Sec. Iowa State Medical Society.

Reports of the various standing committees were next in order, as follows:

SCIENTIFIC PROGRAM
R. J. Calcote, Chairman

Dr. Calcote: Our program has already been placed in your hands in printed form. We shall not have much to add to this. After we got this program together and looked it over, we thought it was a pretty good program and were proud of it. We hope you enjoy every minute of it. There are one or two special features to which I want to call your attention. First, we have changed the welcoming addresses and the President's address over to an evening session and this afternoon we shall have a clinical session. We feel very proud in getting five men of national renown for this session and we are sure they will be very instructive. We are also sure you will enjoy tonight, in addition to the President's address, the address by Dr. Schaufler of Kansas City, a very able speaker. I have heard him. Tomorrow and Thursday we have some of the best talent that the State has to offer on our program. Tomorrow afternoon Dr. Blair, an eminent plastic surgeon from St. Louis, will address you. Thursday morning we have Dr. Smith, a urologist from Kansas City. We are sure you will enjoy him. (Applause.)

The Chairman: I want to thank Dr. Calcote for his very excellent program. He has done an enormous amount of work in securing these men. I think the nearer our Society approaches a post-graduate course the better it will be. Any society that invites to its meetings men from over the country will be a better society and the meetings will be more largely attended and the men doing practice who are members of that society, will be greatly benefited.

MEDICAL LEGISLATION

Dr. Frank Vinsonhaler, Chairman

Dr. Vinsonhaler: Dr. Mann has practically made my report. That portion that he hasn't made was published in the May issue of the Journal, so that you already have the report of the Committee on Legislation. I am obliged to Dr. Mann for the kindly expressions that he has used in connection with my efforts in attempting to pass the Basic Science Law. Last May in El Dorado I was appointed chairman of the Committee on Legislation and that committee was instructed by the Society to endeavor to secure the passage of the Basic Science Law. I knew very little about the law. I knew only that it was a law sponsored by the American Medical Association for States having boards for each cult or school of medicine. We had five. So the Basic Science Law was recommended for States like ours. I began a study of the law and it was with some misgivings that I began the work. Dr. Mann spoke about my visits over the State and referred to me as a preacher. If I am, he is the presiding elder. (Laughter). I have always felt that a good presiding elder was lost when Dr. Mann went into medicine.

I enjoyed my trip over the State, and the splendid hospitality of the physicians. They entertained me royally in their homes. On my trip to one town in the northern part of the State, I stopped at a very homelike hotel. The lady who owned it was the widow of a physician. I had a wonderful room and supper and breakfast, and came down to pay my bill, and the lady refused to take anything at all. She said that for anyone that was engaged in that sort of work, she felt that she wanted to do that much to help along. I was very much touched by that. She said her husband, if he were alive, would certainly not permit any charge to be made any one that was trying to do the service that I was doing. I had never been over the State before. There was a number of towns I visited that I knew by name only. We have a beautiful State, the most beautiful I have ever seen in my life. We have wonderful people, too. The reaction of the medical profession over the State was all that could be desired. People turned out to the meetings; members of the Legislature, as well. I went to see one man who was not even nominated to the Legislature yet, but learned that he was the only man who was aspiring to that position. So I went to see him with the endeavor to secure his influence in the Legislature. He was a little surprised. He said, "Aren't you premature?" He said, "I am not a member of the Legislature and I don't know that I shall be." I said, "It looks very much like you will be from what I can see."

The very least that I did for the association was not a compulsory duty, but one I enjoyed very much.

When the Legislators made their trip through Virginia, North Carolina and South Carolina. I went with them, as the official physician. We met down in the dining room of the Hotel Marion. The Legislators were all present. It was announced to them that I had been appointed to an official position for the trip and the men said, "May God have mercy on your souls." None of them died before they got back, although some of them came very near dying. They took a lot of salts and occasionally a shot of morphine or something. We had one case of appendicitis, one of angina pectoris, one of gallstone colic and

about thirty cases of flu. So that you know I didn't have a sinecure.

The reception at Richmond was wonderful. We took dinner with Gov. Byrd. He had all the State officials there. We all met them; and among them was the attorney-general of Virginia, Saunders, a very attractive man. He said, "I want to meet the members of the Arkansas Legislature." He thought I was a member. He said, "What are you doing here? Are you here for the purpose of learning something? Do you think we people of Virginia can teach you anything. I never knew a Legislature to attempt a thing like that before." I said, "It reminds me of John Sharp Williams, who said he was going to his country home to get a good night's rest. He got in the bed and there was a hound that began to bellow out in the yard and bellowed all night, and he didn't sleep at all. He got up with a bad humor in the morning and said to the negro overseer: 'You have got to kill that dog! He kept me awake all last night. I didn't get any sleep.' The fellow said, 'We can't kill that dog. That's old Timothy. That's the best trail hound you've got.' 'What's the matter with him anyhow?' 'He knows there is something that he wants and he don't know just what it is.' I said, 'That's what's the matter with the Arkansas Legislature.'"

I think we did good on the trip. We passed your bill. I say "We." I want you to understand that every doctor nearly in Arkansas had something to do with it, and a great deal to do with it. They stood loyally behind their representatives and the representatives listened to them. Dr. Mann said, when you go to the Legislature of Arkansas in the right way and ask for something, you are going to get it. We asked for it in the right way and we did get it. He said when it came to the crucial days before the Legislature, I side-stepped. That was true. There were things that I didn't know and there were things that other people knew that I didn't know. So I asked for help, and Dr. Norwood was appointed official steerer. Gentlemen, you made no mistake. He and his brother, a former attorney general of this State, saved our bill on more occasions than one when it would have been utterly lost. Our bill was introduced in the Senate by Hardy, who is a physician from Faulkner County, living at Greenbrier. He did wonderful work. He fought a good fight. I say, if you ever elect a governor of Arkansas who is a doctor, Hardy would be a good man. I don't know whether you will ever do anything like that. If you should want to look around for such a man, you can't find any man more devoted to the cause of the medical profession than Hardy. He fought our fight at a personal sacrifice to his own interests.

Another man that we elected from Pulaski County that ought to be remembered is Dr. Morgan Smith. Dr. Smith was in the lower house and took care of the bill there, and he did so with a great deal of patience, a great deal of tact and a great deal of ability, and under conditions that tried the man. You can't appreciate it unless you were there and know something about it. There were days when he didn't obtain any recognition. Those who presided over the house didn't see him at all. But we had with us a man who has already been mentioned, the Hon. Peter Deisch from Helena. He is here. What he doesn't know about the law and the prophets and everything else that is necessary is not known. He was there all the time on the job and he knew precisely what the

reaction would be in everything that we undertook and he didn't make any mistakes at all. If I were going to say who should have the most credit for the passage of this law, I would say the Hon. Peter Deisch (applause), because he just knew more than we did and he knew more about how to do it. He has been a member of the Legislature himself and he knew more about it than we did. Now, the doctors that came up from Hempstead County, Don Smith, Martindale and Lile; Buchanan from Prescott, and other men over the State did good work. And if I don't mention the other men who came up and helped us and spent their time unselfishly, their names don't come to me right at this time. But there wasn't a man we called on that didn't come out and do his part.

It is the most heartening thing that has happened in the history of medicine in this State. Heretofore we have been whipped, heretofore we have been bullied, and heretofore we have been cowed. The only reason is that we were never able to coordinate and never able to work together at the same time.

Dr. Mann says, there are things yet to be done. I just want to say that we kept the faith in the best way we knew how. Applause).

The Chairman: Dr. Norwood is here. I will ask him to say something right now.

Dr. Norwood: I have already said what I knew and more, too. It is true, I was a member of the Committee on Medical Legislation. But Dr. Mann and Dr. Vinsonhaler have covered that with the exception of the good deeds of one man, Mr. Deisch. He was the most persistent and consistent worker I ever saw in my life, and I think it would be a good thing for the Arkansas Medical Society to make overtures with him, if we can, to employ him the rest of his life (applause) or from now on for the next four or five years until we let those fellows know they are whipped. They are whipped now but they don't believe it. And it will take efficient work to do that. If I should make any recommendation at all, it would be for the next committee to try to get the services of Senator Deisch. We would like to hear from him.

The Chairman: The next is a little talk by Mr. Peter Deisch. Through the recommendation of Dr. Garrison and others we secured the services of Mr. Deisch to help get our bill through. Now, the doctor who was speaker of the House said, "I can beat that bill by fair or foul methods, and I am going to do it." Before the session was over, that same doctor turned around and was voting for that bill and trying to get it through.

Mr. Deisch: As one who saw something of the labor involved in bringing about a great constructive achievement in legislation, by

your Society; the carrying into effect of the far-sighted planning by your officers and executive committee, in the interest not only of the people of today, but of those of the future, I have been invited to bring to your attention some of the facts involved in securing legislation so long desired by you. Allow me to say just a word to express my deep sense of gratitude for the rare and special distinction conferred on me by placing my name on your program.

I have been informed by your officers that the enactment by our Legislature of the basic science law places Arkansas on a parity with the leading States of this Republic in the matter of safe-guarding the health and life itself of the citizens of this State. The last session of our Legislature, whatever might have been its alleged delinquencies in other respects, faced the problems of the people along the line of medical legislation and solved them in a courageous manner.

Members of the Arkansas Legislature have always been loyal and full of hopes and ideals for their State. When they differ with the measure or proposal which we advocate we should remember the varying conditions which exist in a territory as different as is the delta counties of eastern Arkansas, from those in the northwestern part of our State. When our proposal is one requiring considerable thought to comprehend, or is novel in its nature, we should further remember that they are called upon to pass upon the merits of some 1,200 bills at each session, and that much time cannot, in the nature of things, be devoted to any one proposal.

My contacts with the members have been uniformly pleasant (and from my point of view always) profitable.

It has been intimated frequently that there is a clash or a coolness between the Legislature and the advocates of scientific questions, or higher education. This, so far as I am concerned, and so far as my knowledge extends, as applied to members of the present legislative body, is utterly untrue. I had nothing but the pleasantest relations, except in one or two instances, with the members of that body.

In our dealings with the Legislature, we never tried to be oratorical. There was one good reason for this, which those inclined to cynicism might consider the whole reason, namely, we should have been very poor at it.

Seriously, however, we would not insult the members of that body by attempting through spellbinding to convince them of the wisdom of projects which their sober and sane judgments could and would not authorize. The plan or project which they were asked by us to support had been given careful study before presentation and was accepted by them with a splendid spirit of co-operation. We found the members generous and reasonable, showing complete confidence in the people whom they represent. We found also that they were independent, doing their own thinking and resenting domination from above or below or from outside, as the case might be. I, therefore, deprecate efforts to belittle the friendliness for and their support of science. Of course, it is understood that a small minority are not justly entitled to be so generously commented upon, but my impression of the majority is that they are patriotic, hard-working and zealous in their effort to advance the cause of the State, morally, materially and educationally.

I should like once again to place on record my unwavering belief in the immense potentiality for good which they possess. I should feel that my judgment of human nature was entirely at fault and that the foundation had been knocked out from under my belief in all the qualities that count for most in life if any events in the future should prove that I was wrong in any respect in my estimate of them.

We finally hit upon a plan of explaining our bill in a simple and correct manner: How the machine is made—that's anatomy; how it works—that's physiology; what affects it—that's chemistry; what its enemies are—that's bacteriology; what may be wrong with it—that's pathology. Then we asked: Should not the man who tinkers with a human machine know these things about it? The automobile mechanic would know this much about his machine.

Before we evolved this method, I was attempting to explain the bill to one of the Senators, and was defining what we termed the basic sciences. I had explained several of them to him, and was engaged in an exposition of the term "bacteriology." He listened with commendable patience for a while, and then said: "No, Senator, let me explain it to you." After he had done so, I learned that he was

a graduate of one of the foremost medical colleges of the nation, and had practiced medicine for many years, though he is now retired.

The present Legislature numbers among its members many able and distinguished men (be gentle, O' feminists) of activity, power and aggressiveness to a great degree, and under proper leadership can be expected in the future to accomplish great things. I have believed in their integrity, their loyalty to their State, and their high ideals for many years, and I always shall. I have great affection for and confidence in them.

The enthusiasm, energy and co-operation displayed by the profession was inspiring and heartening to your attorney. It recalled to me a verse by an author unknown to me:

"The portals are open, the white road leads
Through thicket and garden, o'er stone and sod.
On, up! Boot and saddle! Give spurs to your
steeds!
There's a city beleaguered that cries for men's
deeds,
For the faith that is strength and the love that
is God!
On through the dawning! Humanity calls!
Life's not a dream in the clover!
On to the walls, on to the walls,
On to the walls and over!"

Our bill was sternly disapproved in the House by one in a position of great responsibility, who desired high school graduates to be eligible for matriculation in the medical school. His ideal was for some such institution as Babbit University, where the growth curve of number of students is only slightly more sacred than the growth curve of endowment is measured in dollars and where scholarship and idealism tiptoe gently past, hand in hand, lest they interrupt the production of young academicians of materialism.

In the position of responsibility which he occupied, nothing so well describes the gentleman as these few lines of doggerel:

For he was the cook of the Nancy Brig,
And the mate and the Captain too
And the Bos'un tight, and the midshipmate,
In fact, Doc was the whole damn crew.

After his 45 minute speech in opposition, the bill passed the House by a much larger majority than its most ardent supporters deemed possible, but let us not attempt to paint the pathetic picture, nor voice the lamentation.

With considerable temerity I now venture a suggestion to a profession almost as old as civilization. Did I not realize that its watch-

word is progress and that it is always ready and anxious to discard the old, where better methods have been demonstrated I would be constrained to refrain from offering what I hope may be a constructive suggestion. Do not the members of your profession tend to hold themselves too much aloof from favorable publicity in the matter of civic and public health affairs of our State? If the suggestion is worthy of consideration, would not a proper method of approach to public appeal in worldly or material matters, be perhaps a more open and public appearance in clinics, health programs and matters of that nature? I do not for a moment mean to minimize, and I quite realize the immensity of the scope of the private benefactions of the profession, but do not they keep themselves too secluded and shielded from the public gaze? Could a bolder stepping out into the public gaze be considered either undignified or immodest?

Such reflections bring us to the obvious and unavoidable conclusion, which is that the organized members of the profession are as fitted as other members of society to determine the availability and wisdom of its public servants as any other group of citizens. For the good of the State men of culture and learning should participate at least to some extent in this task. Instead of leaving this matter entirely to those interested in politics, or to chance, should they not assume at least some degree of leadership along this line? Any form of active politics would, of course, be avoided, but I have thought that favorable publicity of the profession might be helpful in case of future contests of this nature.

Often, when the result of our efforts seemed in doubt, did we see in fancy, success, as she sits upon the rock-ribbed Mount of Right, a peaceful virgin, frowning chaos and disorder down throughout our world. We learned that genius and hard work are not the same; and lacking the former, we acquired a great capacity for the latter. We cultivated patience, perseverance and resignation, and studied closely "Fox's Book of Martyrs," supplemented with frequent medication over the episode of Robert Bruce and the Spider. From us, Success was hid, betimes, in mist; and from her dim retreat, 'twas sport to watch us climb, and stumble, fall, and then again essay the height. There leads no path of dalliance to her bower; to her favor, winds the royal road of honor, courage and devotion. With

the largess of content that on the faithful she bestows, nor gold, nor regal purple, nor the "wealth of Ind," nor argosy with precious stones deep laden, e'en can vie; all these are but the greedy gew-gaws of a life misused, against the tranquil balm that waits the seal of her approval.

The Chairman: I want to thank Mr. Deisch for his very valuable services to us. I always found him in good humor and found him working when I went to Little Rock. I want to supplement just a word. I think the Arkansas Medical Society needs the services of an attorney and needs him all the time in one way or another.

NECROLOGY

Dr. Don Smith, Chairman

The Secretary: This committee will make its report in the way of a Memorial Session to be held tomorrow at 8:30 a. m., at the First Presbyterian Church.

CANCER CONTROL

Dr. Dewell Gann, Jr., Chairman

Mr. President and Gentlemen of the House of Delegates:

Your Committee on Cancer Control respectively submits the following report:

The activities of this Committee have been more numerous and varied this year than ever before. This Committee in connection with the State Committee of the American Society for the Control of Cancer has carried the message of Cancer Control to practically every doctor and nurse in the State and many thousands of our people. This has been accomplished through the mails, by the press and over the radio. During this year sixteen (16) ten minute talks covering every phase of cancer control have been broadcast over station KGJF at Little Rock, through the courtesy of the Reverend M. E. Borders, by a dozen or more of our leading physicians and surgeons and one laywoman. At this time, under the supervision of Dr. Grayson Tarkington and the direction of the radio committee of the Garland County Medical Society of which Dr. W. T. Wootton is Chairman a similar program is being arranged for broadcast over KTHS, one of the strongest and most popular stations in the South. The work of broadcasting at frequent intervals over short periods of time has impressed us as satisfactory and one of us has an arrangement with station KGJF at Little Rock whereby as much as an hour a week may be utilized in broadcasting such matters of health as may be of interest to our profession and the welfare of the public. The one hundred dollars appropriated by the Council of the Arkansas Medical Society at its meeting in December for use by the Cancer Control Committee was used to buy stock in the Arkansas Broadcasting Corporation.

The practice of conducting symposia on Cancer at the County Medical Society Meetings has been continued and will be continued this fall. In addition to these we have promise of co-operation of the State Board of Health under the direction of Dr. C. W. Garrison and the State Tuberculosis

Association under the direction of Miss Erle Chambers, in fact, one of us had a two hour conference with Miss Chambers and her county health nurses on Friday, May 3rd, with the view of obtaining their assistance during cancer week this fall.

At the State Fair last year a cancer clinic was held in the private tent of Mr. Bylander, and through his courtesy, no other space being available. During Fair week more than 1,500 people applied at the tent for information, forty-five (45) of whom had some form of cancer. This work was carried on under the direction of State Committee of the American Society for the Control of Cancer under the personal supervision of its Secretary, Dr. S. F. Hoge. Each day the doctors of Little Rock contributed liberally of their time and some one was in constant attendance. Literature published and donated by the National Society was circulated freely.

Cancer clinics have been in continuous operation, especially at St. Vincent's Infirmary.

No public meetings have thus far been held this year but every effort is being made to complete the organization of a Committee in every County in the State and during the third week of September we expect to intensify and increase our activities.

Other than our educational work we have very little to offer. Cancer remains entity the cause of which has not been discovered. The hereditary problem remains questionable and its transmissibility has been accomplished in lower animals only. It is insidious in its onset, painless in its incipency and local in its early stages, when curable if properly treated. In its early recognition lies the hope of cure.

Surgery, radium and x-ray are the most efficient measures in its treatment.

Recommendations:

1. It is recommended that this Committee continue its educational program.
2. That the Society contribute \$250.00 annually to help defray its expenses, and
3. That every member of the Society consider himself a committee of one and lend his assistance to this work.

Signed:

DEWELL GANN, JR., Chairman,
P. R. WATKINS, Mena,
J. C. HUGHES, Hoxie.

STUDENT LOAN FUND

Dr. E. F. Ellis, Chairman

To the House of Delegates, Arkansas Medical Society:

Gentlemen:

The Committee on Student Loan Fund has very little to report this year. Former loans are in good condition, that is, the interest has been paid when due, and a small payment has been made on principal.

Respectfully submitted,

E. F. ELLIS,
Wm. R. BATHURST,
ROBT. CALDWELL.

ENTERTAINMENT

Dr. W. T. Wootton, Chairman

Dr. Wootton: We would earnestly request that you men attend to your knitting. The ladies will be taken care of. Our chemist is now testing out the fuel in our galvanized bucket. If that bucket suffices, we will serve that high-test gas tomorrow night at the reception and ball, the reception for the president and the ball for the older men. There may be some of the younger generation that don't need the high test and some of it may do for them. But at any rate, immediately following the scientific section in this room, the president's reception will take place on the mezzanine immediately in front of this room, while the spittoons, etc., are being removed, getting ready for the ball. And then we will dance until daylight. (Applause.)

The Chairman: I sincerely hope you serve no liquor to the members of this Society while they are in Hot Springs. Now, I hope that. I think, of all men in the world who should be law-abiding citizens, it is the doctors, I think, if there is anybody in the world who wants to support our President in his law enforcement, if there is any class of citizens in the world who want to do that thing, it ought to be the medical profession. And I am just simply opposed to some of our doctors, who are very weak, going off to conventions and drinking "bootleg" in violation of the law of our country. (Applause.)

REPORT OF COUNCIL

Dr. Dewell Gann, Sr., Chairman

Dr. Gann: The Council met in Mid-Winter session in Little Rock last December and approved the action of the Legislative Committee. We gave them everything they asked and some more, and appropriated money for current bills. A more detailed report will be presented Thursday.

The Chairman: I want to thank Dr. Gann and the Council for the very generous and very kind response they made in helping in every way they could to carry through our program and making it a success. We feel in getting through this law we have made the first step forward with our Society in a legislative way in a great many years. A leading quack in Little Rock, who controls the medical situation over there, said, "This is the same old bill they have had up for seventeen years and we are going to defeat it."

REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS

Dr. J. W. Walker, Secretary

The State Medical Board of the Arkansas Medical Society submits a report of its activities for the past year with a resume of its transactions during the past eight years. The writer, along with the other members of the Board was selected

by this Society at its annual meeting in this city in May, 1921 to serve as a member of the State Board of Medical Examiners, and has served as secretary continuously during the past eight years. On behalf of the other members of the board and on my own account, I want to express to this Society our sincere appreciation of the honor it has bestowed upon us and to give an account of our stewardship.

We consider the State Board of Medical Examiners an important and integral part of the medical organization of this State, and we have tried in our official acts to carry out what we believed to be the desires of this Society as expressed in the statutes.

We have tried to maintain reasonable standards for licensure—admitting to our examinations only graduates of Class "A" Medical schools, and reciprocating physicians from other States who were graduates of reputable medical schools and who came to us with proper and complete credentials endorsed by the officials of other States. Reciprocity applications have had our closest scrutiny as to identity of the applicant, his graduation his license from the State from which he applies, and as to his ethical and moral fitness. We believe very few, if any, errors have been made in granting reciprocity license and we know absolutely that no such license has been granted by fraud or upon fraudulent credentials.

By this careful practice such standards have been maintained that the Board has been well recognized by the licensing authorities of the other States and not a single reciprocity contract has been voided. We now have reciprocity agreements with 31 of the States—and all of them with possibly three exceptions will accept the credentials of our licentiates even though no formal reciprocity agreement has been reached. To date the Board has not accepted the credentials of licentiates of the National Board of Medical Examiners, largely because that organization has had no authorized, legal status, but it is my personal opinion that the National Board should be recognized by us and its licentiates given the same consideration as though they were applicants endorsed by legalized licensing authority.

Our examinations are held twice each year on the 2d Tuesday and Wednesday of May and November. About 80 per cent to 90 per cent of our candidates come from the University of Ark. Medical School. Very few men who take the State Board examinations fail—largely because the unfit are weeded out in the Medical schools and never reach the State Board of Examiners. We take pardonable pride in the fact that so few of the graduates fail in their examinations either in Arkansas or in any other State. Two years ago twenty-nine of our graduates were examined in New York and not a one of them failed to pass. At the last examination of the West Virginia Board two of our graduates took the examination and these two made the highest average per cent of the whole class.

It is my own personal opinion that the greatest forward stride made for the medical profession in Arkansas was accomplished by the recent Legislature in the enactment of the Basic Science Law. If the provisions of this Act are strictly adhered to it will be impossible hereafter for the unfit, the incompetent, or the fraudulent candidate to secure license, or to engage in legitimate practice.

We have not taken stock in the argument that there is a scarcity of physicians, and that lower

requirements should be exacted of physicians who expect to practice in the rural districts. The State may make its requirements as high as it will, and there will still come from the best educated, intelligent youth of the State men in sufficient numbers to supply the demands. The medical profession seems to have an appeal to the imagination of young men that draws them into medical schools and into the practice of medicine that no hardships can discourage and no requirements debar from practice.

As to practice in rural communities it is governed largely by economic conditions. Young doctors will go into practice anywhere if living conditions are satisfactory and financial remunerations are adequate. If a community complains that it cannot get a physician to locate there, close investigation will reveal that it will not adequately support a physician should he desire to engage in practice there. Good roads, automobiles and county and community hospitals have been large factors in bringing this about.

In conclusion I want again to thank the Arkansas Medical Society for the privilege I have had during the past eight years to serve the profession and the people of Arkansas. The duties at times have been arduous, there have been practically no financial rewards, but it has been with me a labor of love to carry out the mandates of this society, to administer the medical practice act with fairness, conscientiousness and with justice as much as it has been within our ability to do. This will conclude my own services as a member of the State Board of Medical Examiners. I am glad to be relieved of the responsibilities, and I have no regrets. I thank you.

REPORT OF THE DELEGATES TO A. M. A.

The Secretary: We wish to refer our readers to the report published in the July, 1928, issue of the Journal.

(An abstract was given by Dr. Bathurst.)

REPORT OF THE SECRETARY

Mr. President, Members of the House of Delegates:

The Arkansas Medical Society ended the year, 1928, with 1,148 members in good standing. This is 12 less than the year, 1927. Many were dropped from our roll for nonpayment of dues, deaths, removed from the State, and other causes. A number of new members were enrolled.

The advertising section in the Journal continues to flourish and satisfy the most critical of the larger advertising agencies. (We trust our members are reasonably pleased with the reading matter.) The income from advertising during the past year exceeds any previous year. We have been offered, at different times, several full page advertisements from manufacturers of cigarettes, the proceeds of which would greatly increase the present income. These accounts were refused. Not that I have any personal objections to the use of cigarettes; but I have, or at least attempted to uphold, a very high standard of ethics in the acceptance of advertising copy. I hope our members will approve the stand taken on this question.

The money collected at one time for the Gorgas Memorial, a subscription of \$165.00, is still held by the Secretary. With accrued interest it now totals \$205.08. This is a separate fund and not included in the following statement.

Our Financial Statement Shows:

Cash on hand at close of last session.....	\$12,916.54	
Received for dues (since last session)	\$3,339.50	
Received interest Secretary's account	49.91	
Received interest Treasurer's account	240.43	
Received interest Journal's account	103.55	
Received interest Student Loan account	45.28	
Received on Principal Student Loan	30.00	
Received for Advertising in Journal	4,254.28	8,062.95
		\$20,979.49
Legislative expense refund.....	93.75	
		\$21,073.24
Current expenses	11,301.74	
Cash on hand	\$ 9,771.50	
Notes Receivable, Student Loan Fund	720.00	
Balance to date.....	\$10,491.50	

In closing I wish to express my gratitude to the Officers, Chairman of Committees, and the County Secretaries for their loyal support and co-operation during the past year.

To Mr. Overton and Mrs. Anna White Phillips, who have been associated with me in this work my appreciation and praise will ever be due.

Respectfully submitted,

Wm. R. Bathurst.

PUBLICITY

Dr. S. F. Hoge, Chairman

Dr. R. H. T. Mann, President
Arkansas State Medical Society.

Dear Dr. Mann:

We, your committee on publicity through it's chairman beg to submit the following report of our activity.

It was the chairman's privilege to attend the councilors meeting held in Little Rock, in January when a preliminary report was submitted. Since then a meeting of the committee composed of Dr. O. H. King of Hot Springs and Dr. W. P. Cooksey of Magnolia, and your chairman, was held in Hot Springs. A record of that meeting is attached.

We feel that much good has been accomplished along this new line of procedure and that the future will return greater rewards for services rendered. We all appreciate most keenly the dangers that beset this new move unless properly hedged with sane conservatism and high regard for the established practices of medical ethics.

We wish to express our appreciation for the excellent work of the Jefferson County Medical Society, in handling the attack against organized medicine which sprang up in their section.

We wish also to express our appreciation to the Pulaski County Medical Society and to the Garland County Medical Society for their co-operation in the educational work on Influenza and Cancer Control.

I thank you.

S. F. HOGE, Chairman,
O. H. KING,
W. P. COOKSEY.

We, the Committee on publicity appointed by the President of the State Medical Society, in attendance at a meeting held in Hot Springs, Ark., February 8, 1929, submit the following data:

(A) We are keenly mindful of the unsullied record set by the years of steadfast adherence to restrict conservatism as pertains to matters of publicity wherein the worthy aims of our excellent society might be tarnished by an improper interpretation of these facts on the part of the public. It would surely be a hazardous and unwarranted experiment to diffuse the ethical principles of our society except in a very circumspect and well ordered manner. To pursue any other form would surely breed criticism and ill-feeling among our excellent members and beget confusion and distrust among our patients.

(B) Again we are aware of the rapid and kaleidoscopic changes of modern progress in medicine. Government and Religious Society, a niche in which cosmos we play no minor role. In many of these divisions it appears that conservatism has become an obsolete art and the hand of radicalism had loosed the emergency brake of better judgment. This absorbing, magnetizing, fascinating, rush and haste can but lead beyond the steadied, immutable aim of our Society.

(C) Viewing these opposite and glowing goals, exhibiting our best judgment in fairness to each, it seems that an amalgamation might yield through the mould of sincerity, a new achievement not yet attained. We wish to follow in proper tune with our associated States and especially with our national Society.

With this data at our command it seems that a more pliable course of diffusion of certain knowledge to the laity as educational and through modern methods, should go far toward accomplishing that greater work of our profession.

The most efficient avenues of reaching the laity, our actual and potential patients are three: Personal contact and discussions; Newspapers and Radio. The abuse of any of these is not only culpable but intolerable. The proper use of them however serves an excellent purpose wisely.

First: We, your committee are in favor of using these means of attaining the goal of an educational program, provided this privilege is kept on the high plane of composite good and not incriminated with individual and personal ambitions.

Second: That articles of interest on questions of preventative medicine, public health, epidemics, etc., should be encouraged and given to the public through the press and over the radio and otherwise; subject to the following restrictive suggestions:

(a) That each unit Society appoint a publicity committee of three or more members whose duty it will be to read and pass judgment on an article before it is released.

(b) That the beginning of each article shall carry the fact that the Society is being represented by the essayist. That any statements made are in accord with the best thought and judgment of the representative Society.

(c) That wherein the subject deals with therapy; and knowing that so very few doctors are in complete accord on this point, it is believed wiser to deal only in general terms and thus forestall definite pre-formed therapeutic opinions on the part of patients.

(d) That the common enemy "quackery" can possibly be better norcotized by educating the pub-

lie along conservative, scientific lines rather than to attempt to char him through the more intense use of his tools.

Signed,

S. F. HOGE, Chairman,
O. H. KING,
W. P. COOKSEY.

REPORT OF TREASURER

Arkansas Medical Society for the year ending
May 7, 1929

My Records Show the Following:

Balance reported May 1, 1928.....\$ 4,975.75

Receipts for the year:

July 1, 1928, received from	
Secretary	\$7,940.79
Interest on Savings Account..	240.43
Interest from Student Loan	
Fund	45.28
Payment principal Student	
Loan Fund	30.00
Refund from Legislative	
Expenses	93.75
Total receipt during year....	\$8,350.25—\$ 8,350.25
Total funds available during year.....	\$13,326.00

Disbursements:

Vouchers No. 275 to 306, inclusive.....	\$11,301.74
Balance on hand May 6, 1929.....	\$ 2,024.26

R. J. CALCOTE, Treasurer.

The Chairman: All these reports will be referred to the Reference Committee for action in due time.

The Chairman: The reports of the Secretary and Treasurer will be referred to the Council. The next order is New Business.

The Secretary: Under this head, it will be well to mention the selection of vacancies that will occur in the State Board of Examiners, that is to come before the General Session. There are vacancies in the 2d, 3d, 6th and 7th Congressional Districts, and the counties composing these districts are given in the program. There are to be three names selected from each district, to be recommended to the Governor. This will come up Thursday afternoon at one-thirty.

The Chairman: Is there any other new business? Has any member anything he wants to bring up at this time?

Dr. White, El Dorado: It has been intimated several times as to the possibility of employing an attorney regularly for the Arkansas Medical Society. I certainly think this is a good suggestion. I don't know whether

it should be brought before this body or the Council. We had the pleasure of having Dr. Wm. E. Jones of Little Rock at our county medical society a couple of months ago, and while there we had several little things come up that we were ashamed of in a way, and made apologies to him because we were doing a little fighting with some of our quacks around in our district, and were having reports of committees on what was done. He said he was very glad to hear it and thought it was a step in advance, and he suggested that we employ an attorney for the State Society and let him be paid a yearly salary and even if necessary increase our dues, and we were in favor of it. Of course, this attorney could be called in to different sections of the State and could be corresponded with. I would like to hear that further discussed. From what I heard this morning, some are very much in favor of our attorney.

The Chairman: Is there any further discussion on it?

Dr. Cox, Helena: I make a motion to that effect. As representative from Phillips County I would like to make a motion that we employ the Hon. Peter Deisch to represent the Society.

Seconded.

The Chairman: Is there any further discussion.

(Cries of "Question.")

The Secretary: The time is coming sooner or later when there will have to be an increase in our dues. This State has the smallest dues of any State in the Union, varying from five up to fifty dollars. Just prepare yourselves, when you are adding this additional expense, that eventually the dues of the State Society will have to be increased to five dollars.

Dr. White: I suggest that you appoint a committee that will work these details out about the dues, etc., which will necessarily have to come.

Dr. Gann, Sr.: I don't think it is fair to saddle everything on the Council. If these men have any objection to employing an attorney, I would be glad to hear them express themselves.

The Chairman: I think this is the place for this matter to come up. Here is what I have to say about this: The good of the Ark-

ansas Medical Society, the health of the two million people living within this State, is too important not to be handled in the proper way, and the five dollars, if it is to be raised to that, is an insignificant sum. If we, through the Arkansas Medical Society, can give the physicians who are now practicing in this State and those who are to practice medicine in the future in this State, the best possible known conditions under which to practice, then I say that the five dollars is nothing compared to the benefits received by each physician who is practicing in the State. Is there any further discussion on it? I want it to be voted on right here before the House.

Dr. Kosminsky: Relative to the motion before the house, I know of no organization or business or anything else that is a success without legal advice and, if this organization expects to prosper as any other organization prospers, legal counsel is absolutely necessary. If you are going to drift from one counsel to another as the years go by, you are going to have a certain antagonism, and I think this is the proper time to select legal counsel and not drift from pillar to post.

Dr. Hoge: I want to add my support to that same motion because, as chairman of the Publicity Committee, we have encountered some questions and problems, official and unofficial, and I know there were some inquiries came up in regard to the fight in Jefferson County, probably there were some that came up at Fort Smith, and there are some in our own city, and I hesitated to act, because I did not know exactly the law on these questions. I would like to go the limit, but not beyond reasonable bounds. I would like the advice of some man who is particularly interested in the aims and ambitions and understands the ethics of the local society with whom we could consult. Then we shall not hesitate a minute to push to the limit.

The President: Is there any further discussion? The motion is that we employ an attorney and that we employ the Hon. Peter Deisch. I am sure we couldn't do better. All who favor this, stand.

Unanimously carried.

Mr. Deisch: I am profoundly grateful to you, gentlemen. When Dr. Vinsonhaler spoke about the reception that he received in a town in northern Arkansas, he didn't know—he

isn't here now—that I knew of that incident. It occurred in Hardy in Sharp County on Spring River, one of the most beautiful sections of America. That resort was established by Dr. G. G. Buford of Memphis during the latter years of his life. He practiced all his life in Memphis. He went through that Ozark country and was enraptured by it and he couldn't find any more fitting place to spend the remaining years of his life. I was married in the hotel that Dr. Vinsonhaler spoke of and became Dr. Buford's son-in-law. Gentlemen, this is the greatest honor that ever came to me in my life. I have had training along this line. The best friend I ever had in the world was Dr. Buford, my father-in-law, and I just can't tell you people how much I appreciate the action you have just taken. I thank you. (Applause).

Dr. Douglas of Eudora: I think that the next logical thing for us to do, for the purpose of paying these fees to the attorney and for the medical propaganda in Arkansas represented by Dr. Hoge of the Publicity Committee, is to raise our dues. If it is in order, I move that we raise the dues to five dollars.

Dr. Kosminsky: I second it.

The Chairman: Any discussion?

Dr. Wm. E. Jones, Little Rock: I am not a delegate, but I should like to say that I think, instead of raising the dues to five dollars, that we should make it ten; then, any amount of money that we do not need for the upkeep of our Society could be used in the students' loan fund to be paid back by those students when they get out in active work. I think it is one of the greatest things we could possibly do for the upbuilding of our profession. We have a number of young men in the State that would make wonderful physicians if they only had the opportunity to get started. Our good friend from Fort Smith, who has the benefit of this loan, was the son of a very good friend of mine, who has been gone many years. It doubtless has been a great boon to this young man to have had this loan, and it will be paid back and he will be very grateful for the use of it.

The Chairman: You have heard the motion and seconded that the dues be raised to five dollars.

Dr. Norwood: I amend the motion to make it ten.

The Secretary: No, please, not more than five dollars.

The Chairman: I appreciate very much your feeling in the matter, Dr. Jones and Dr. Norwood, but I have seen where it has caused a great deal of trouble in the rural districts of the State where the dues were raised in the past, and I believe if you will let us we will raise it to five dollars and then take an advanced step later if it becomes necessary. Is there any further discussion?

The Secretary: Having had some experience in collecting dues from over a thousand members for a good many years, I fear it will be difficult to raise the dues to five dollars. This increase might appeal to you this morning while you feel the need of it, with a small number present; but our seven or eight hundred members not present may object seriously. We shall lose at least 20 per cent of our members during the next year. We will not be any better off financially, but I think in the following year we will get a large number back and eventually have our income increased. It is a step we must take eventually and we might as well go through that depression at this time.

Dr. Gann, Sr.: Let's not jump so far. Let's put it at four dollars. I make a motion that we raise it from three to four dollars.

The Chairman: You are out of order.

Dr. Gann: It's a substitute or amendment. Will the doctor accept the amendment?

The Chairman: Is there a second to Dr. Gann's motion? (Cries of "no.")

Dr. Gann: I will withdraw it.

Dr. Ware of Greenwood: I think Dr. Bathurst's remarks are very timely, except in my opinion we will lose thirty per cent of the members and it will take us at least four years to be finally where we are today. From the report of the treasurer, I don't see that it is necessary at this moment to raise the dues above three dollars. I am not a delegate, but I would like to voice my sentiments against the employment of an attorney regularly. If you are going in to spend money, of course, you will lose members. I think that the dues can stand for at least a year, maybe two years, just what they are today. It doesn't look well for organized medicine to jump in and let the public know we have employed an attorney

regularly and we raised our dues. It doesn't look good.

Dr. S. W. Douglas: I feel that five dollars is needed. I consider that the representative doctors of the State of Arkansas are in this meeting today. I am sure all these doctors will use their influence in their home society and there will be a very small falling off from the membership of the organization. I believe if the secretary and other members of the Society will publish in the Journal or otherwise the real reason behind this raise, we will not have that falling off. I believe the membership of the Arkansas Medical Society is too loyal to let two dollars a year stand in the way of their membership.

Dr. Calcote: In my report this morning, I reported some \$2,950.00 less than I did last year. So you see from that alone it might show we need an increase in dues. Some of these days we shall need a full-time secretary. Some of these days we would like to look forward to a permanent home, and we shall need money for these things when they come, and we might as well start now.

VOICE: What are you going to pay the attorney?

The Chairman: The Council will fix that. I am sure it will not be excessive.

Motion unanimously carried by a rising vote. The Chairman: I think we are stepping forward to better days in Arkansas and I want to thank you. I believe we are stepping forward to the time when the irregulars will not be running around telling us where to head in.

In this connection there is one other thing I want to say. We have in this State a great many men who are licensed to practice medicine, who are not qualified. They are legal practitioners for the rest of their lives. Now, where they are of good moral character, it will be better, if you can do so in your own county, to take these men in and work with them than to leave them out, because when the Legislature meets next time, if you do not exclude them these men will be working with you and working just as hard as you are for the forward steps which we hope to take in the future. I was very much opposed to that thing, and my plea was "no surrender," and yet I have seen it tried out in other States and they have been so far ahead of us in medical legislation, that I have changed my views wholly on that subject.

The selection of the Nominating Committee being in order, the following were chosen :

PERSONNEL OF NOMINATING COMMITTEE

1st Councilor District—W. M. Majors, Paragould.

2nd Councilor District—S. J. Allbright, Searcy.

3rd Councilor District—T. G. Porter, Hazen.

4th Councilor District—J. M. Lemons, Pine Bluff.

5th Councilor District—D. E. White, El Dorado.

6th Councilor District—P. H. Phillips, Ashdown.

7th Councilor District—Geo. B. Fletcher, Hot Springs.

8th Councilor District—M. E. McCaskill, Little Rock.

9th Councilor District—W. H. Poynor, Harrison.

10th Councilor District—E. F. Ellis, Fayetteville.

On motion, the House of Delegates adjourned.

HOUSE OF DELEGATES

Last Day

Thursday, May 9, 1929.

The House of Delegates was called to order by the Chairman, Dr. Mann, at 1:30 P. M.

The Secretary: I have the attendance cards signed by the delegates and a quorum is present. I move this take the place of a long and tedious roll call.

Seconded. Carried.

The report of the Nominating Committee was the first order of business.

We, the Nominating Committee wish to make the following report:

For President: E. E. Barlow, Dermott; D. A. Rhinehart, Little Rock; Dewell Gann, Sr., Benton.

First Vice-President: Geo. B. Fletcher, Hot Springs.

Second Vice-President: B. H. Hawkins, Mena.

Third Vice-President: J. G. Gladden, Western Grove.

Treasurer: R. J. Calcote, Little Rock.

Secretary: Wm. R. Bathurst, Little Rock.

Councilors

First District—W. W. Verser, Harrisburg.

Third District—M. C. John, Stuttgart.

Fifth District—L. L. Purifoy, El Dorado.

Seventh District—Dewell Gann, Sr., Benton.

Ninth District—W. H. Poynor, Harrison.

Delegate to the A. M. A.—Wm. R. Bathurst Little Rock.

Thereupon, the Chairman appointed Drs. Kosminsky, Calcote and Robins tellers, and the House of Delegates proceeded to ballot upon the three names selected by the Nominating Committee, Drs. E. E. Barlow, D. A.

Rhinehart and Dewell Gann, Sr., for the office of President-Elect.

Upon the first ballot, neither of the candidates received a majority of all votes cast.

Upon the second ballot, neither of the candidates received a majority of all votes cast.

Dr. McCaskill: I make a motion to drop the low man and vote on the two high.

Seconded. Carried.

Upon the third ballot, Dr. Barlow received a majority of all votes cast.

Dr. Rhinehart: I move that the vote be made unanimous for Dr. Barlow. I don't think you could have selected a better man.

Carried, on being seconded, and Dr. Barlow was declared elected.

Dr. Barlow was escorted to the platform by Dr. Rhinehart amidst applause.

Dr. Barlow: Mr. President, Fellows of the Arkansas Medical Society and Ladies: It is very kind indeed of you to elect me President-Elect of the Arkansas Medical Society, of which I have been a member 26 years, and have missed only two meetings. In electing me, you have honored a section of the State that has never been represented before by a president, and I feel that the people whom I serve in that section will be as proud of this honor as I am. All I can promise is that I will try to be as loyal to the Arkansas Medical Society in the future while I live as I have in the past. I thank you. (Applause).

The Chairman: Barlow looks like he is able and strong enough to do the job. It's a big job and the difficulties are increasing day by day.

Dr. Kosminsky: I move that the President cast the ballot for the other candidates.

Carried, on being seconded.

REPORT OF REFERENCE COMMITTEE

Dr. Kosminsky, Chairman

We, your reference Committee beg to report that we find the President's address timely, filled with good ideas and suggestions. Likewise the report of your secretary and treasurer full and complete.

The reports of your various committees such as Cancer Control, Publicity and Delegate to A. M. A. good in every respect and should be thanked for their work.

Report of State Board of Medical Examiners excellent.

Student Loan Fund good and we feel that same could be expanded with advantage.

The continuation of the efforts for a State General Hospital be sanctioned. Permit us to compliment and thank your Legislative Committee for their good work in getting the Basic Science Law enacted. We congratulate the Society on the spirit of enthusiasm and co-operation at this meeting and urge to continue the good work which has bright prospects for the future of our organization.

A vote of thanks be extended the Garland County Medical Society, the City of Hot Springs and others who have added to make this a wonderful meeting. We wish to compliment the retiring officers for the good work accomplished during the past year.

L. J. KOSMINSKY, Chairman,
J. M. PROCTOR,
M. E. McCaskill.

Dr. Gann, Sr.: I move the adoption of this report.

Carried, on being seconded.

REPORT OF COUNCIL

Dr. Wolfermann, Secretary

The Council met at 12:30. Present: Dr. Mann, President; Dr. Cothorn, President-Elect; Secretary Bathurst; Councilors Gann, Verser, Evans, John, Purifoy and Wolfermann. Guests—Ellis, Vinsonhaler, Lemons, Deisch.

Dr. Wolfermann spoke of the situation in Western Arkansas brought about by the conduct of certain hospitals and physicians in Logan County.

After some discussion Dr. Wolfermann was instructed to notify these gentlemen to appear before the Council Wednesday and show cause why they should not be summarily dealt with.

Drs. Evans, John and Verser were appointed as an Auditing Committee to audit the books of the Secretary and Treasurer.

Drs. Mann, Cothorn and Bathurst were appointed a Committee to confer with Hon. Peter Deisch, the newly elected attorney of the Society, as to his annual retainer and to report back at the meeting of the Council on Wednesday noon.

The sum of \$100.00 was appropriated for use by the Committee on Cancer Control for the ensuing year.

The Secretary was authorized to pay all necessary expenses, as well as the usual honorarium as Secretary-Editor.

Council adjourned till the next day at 12:30.

Wednesday, May 8, 1929

Council met at 12:30.

Present: President Mann, President-Elect Cothorn, Secretary Bathurst, Councilors Gann, Archer, Wolfermann, John, Purifoy, Verser and Watkins. Guests: Drs. W. R. Hunt, Moulton and Lemons, and Mr. Deisch, Attorney.

The Auditing Committee reported as follows:

"We audited the books of the Secretary and Treasurer and so far as we could ascertain, found them absolutely correct."

Drs. John, Verser and Evans, the Committee appointed to confer with Attorney Deisch was not yet ready to report.

Council adjourned until 4:00 o'clock, at which time the Drs. Smith of Paris were notified to appear before the Council.

The Council met at 4:00 P. M. pursuant to adjournment.

Present: Councilors Gann, Wolfermann, Verser, John, Archer, Evans, Purifoy and Watkins; Secretary Bathurst and Guests Dr. W. R. Hunt and Mr. Deisch, Attorney.

Dr. J. F. Smith, of Paris, responded to the notice sent the Drs. Smith by Councilor Wolfermann, Councilor of the 10th District, as follows:

"You are required to appear before the Council of the Arkansas Medical Society on the 8th day of May, 1929, at four o'clock P. M., at the Arlington Hotel, Hot Springs, Ark., to answer the charge of violating Sec. 5 of Chap. 9, of said Society in working for or being employed by or interested in any organization which solicits patients. Your failure to answer will be regarded as an admission of the correctness of said charges."

The charges as preferred were then sent to Dr. Smith and a copy submitted to him as follows:

IN THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

To Drs. A. M. Smith, J. J. Smith and J. F. Smith:

S. J. Wolfermann, as Councilor of the Tenth District of the Arkansas Medical Society for a cause of complaint against you and each of you says:

That you and each of you are citizens of Logan County, residing in the City of Paris therein, and are engaged in the practice of medicine and surgery in said county.

That on the first day of September, 1928, and continuing until this date, you were working for, employed by, and interested in the People's Hospital Company, which Company operates Hospitals in Paris, Logan County, and in Ft. Smith, Sebastian County.

That said People's Hospital Company, during all of the times herein mentioned, employed and maintains, and does now so employ and maintain solicitors who solicit patronage in the form of medical and surgical patients for said Company.

That said Company executes contracts with persons who desire to employ them, in which said Company agrees to supply medical and surgical services to the holders of said contracts.

That said agreements are secured by solicitors who go from house to house, plant to plant, and mine to mine, through the counties comprising the Tenth District, and who personally solicit on behalf of said Company the employment heretofore described herein, and by said solicitation, bring patients to said Company.

That said agreements bear on their printed forms, as members of the medical staff of said Company, the names of you and each of you, and said contracts are executed by A. M. Smith, as chief surgeon.

That said services so rendered to the patients secured, as a result of direct solicitation, are performed by you and each of you.

WHEREFORE, S. J. Wolfermann says that by reason of said practices, you and each of you are ineligible to be members of the Logan County Medical Society, or of any other component County Medical Society in this State, or of the Arkansas State Medical Society, and prays for such

relief in the premises as the Council may seem proper.

S. J. WOLFERMANN,
Councilor of Tenth District.

Dr. J. F. Smith, in answer to the said charges, stated that he and his father and uncle, Drs. A. M. and J. J. Smith, were employed by the Peoples Hospital Company on a strictly fee bases to render surgical and medical services for patients brought to the Colonial Hospital in Ft. Smith, and that they were similarly employed by the Peoples Hospital Association for similar services as the Paris Hospital; that he and Drs. A. M. and J. J. Smith owned and operated said hospitals, but that they were not in any way interested in either the Peoples Hospital Company at Ft. Smith or the Peoples Hospital Association at Paris. He stated that he was aware of the fact that these two organizations had paid solicitors who solicited patients and that he was convinced now, since he heard the particular by-laws read to him, that they were violating the same.

A copy of the contract that the patients entered into with said two organizations was offered to the Council.

Dr. W. R. Hunt added testimony to the solicitation of patients by these two organizations, and spoke of the demoralizing effect such condition of affairs had on the practice of medicine by the ethical practitioners in Western Arkansas.

Dr. Smith was dismissed, and the Council, by unanimous consent, authorized Mr. Deisch to draft a resolution on behalf of the Council for presentation to the House of Delegates, that it is the sense of the Council that the charter of the Logan County Medical Society be revoked, for violation of the constitution and by-laws of the Arkansas Medical Society and of the Ethics of the American Medical Association in manner and form as set forth in the charges as above preferred.

Upon motion, the Council adjourned until Thursday, May 9th, at 12:30.

May 9th.

At noon today three hundred dollars was appropriated for the purchase of complimentary copies of Hygeia.

The committee to confer with Mr. Deisch reported that they had reached an agreement to pay Mr. Deisch a small annual retainer and a stipulated sum per day while engaged in any work required and his expense. Mr. Deisch's arrangement is to be at the call of the President and Secretary of the State Society and any county society or any one in a county society wishing his services must go through the President and Secretary of the State Society to get to him, that they cannot go direct.

Resolutions were presented, expressing our thanks to Drs. Hardy, Smith and George for their services as Legislators in the passage of the Basic Science Law.

Dr. Wolfermann: I move the adoption of the report.

Carried, on being seconded.

Dr. Wolfermann: I will now read some resolutions.

The Council of the Arkansas Medical Society, by unanimous vote, taken on the 8th day of May,

1929, at the annual convention held in Hot Springs, Arkansas, recommends to the House of Delegates that the charter of the Logan County Medical Society be revoked, for the reason and on the grounds that said Society has admitted into its membership various physicians whose conduct violates the principles of medical ethics promulgated by the American Medical Association, in violation of Section 3, Chapter 9; and Section 4, Chapter 10, of the by-laws of the Arkansas Medical Society.

DEWELL GANN, SR.,
Chairman of the Council of the
Arkansas Medical Society.

Attest:

Wm. R. Bathurst, Secretary.

Dr. White: I move the adoption of that resolution.

Carried, on being seconded.

WHEREAS, charges of unprofessional conduct on the part of various physicians of this State, in the matter of working for, or being employed by, associations or organizations which solicit patronage, have been brought before the Council, and which charges have been substantiated, and

WHEREAS such conduct is declared by the American Medical Association to be subversive of the principles, and in violation of the ethics of said Association, and

WHEREAS such conduct is demoralizing, unfair and unbecoming to the profession, therefore

BE IT RESOLVED by the House of Delegates of the Arkansas Medical Society that the conduct heretofore described is condemned as a flagrant violation of the ethics of the profession, and is declared to be inimical to the profession, and any physician found guilty of such practices will be denied membership in this Society, or if already a member will be expelled from, and no longer held to be a member of the Arkansas Medical Society.

Dr. Rhinehart: I move the adoption of that resolution.

Carried, on being seconded.

Secretary of the Council continues:

WHEREAS, the Council of the Arkansas Medical Society has recommended to the House of Delegates that the charter of the Logan County Medical Society be revoked, for the reason and on the grounds that said component society has admitted into its membership various physicians whose conduct violates the principles of medical ethics promulgated by the Arkansas Medical Association, in violation of Section 3, Chapter 9, and section 4, chapter 10, of the by-laws of the Arkansas Medical Society, and

WHEREAS after due consideration by this body such charges have been found to be true, therefore

BE IT RESOLVED THAT UNDER the authority given by Section 3, Chapter 9, of the by-laws of the Arkansas Medical Society, the charter of said component Society is hereby revoked and held for naught.

Dr. Phillips: I move its adoption.

Carried, on being seconded.

On motion, the House of Delegates adjourned *sine die*.

GENERAL SESSION

First Day

The General Session was called to order at 8:00 o'clock, P. M., Tuesday, May 7, 1929, by Dr. Mann, Chairman.

Invocation by Rev. Charles Collins, Pastor St. Lukes Episcopal Church.

Almighty and Everlasting God, Who alone art our refuge and strength, by Whose grateful power it is that the earth and all its inhabitants are brought into being, Who giveth life unto all things and Who sustaineth our lives by the breath of Thy Almighty power, we praise Thee for all the blessings which Thou dost put upon us in this work and we humbly beseech Thee that Thy spirit of grace may rest upon us, that we may realize that this life is but a trust given unto us and we must answer to Thee when Thou callest us to account for all the things which are done by us in this world. Bestow upon us, we pray Thee, sufficient grace that will enable us to live our life of stewardship. Grant, O Father, that in Thy power the allotted tasks of this life which are put into our hands to do. Upon these Thy servants gathered here we pray Thee to send especially Thy blessings of wisdom; Thou dost put into our minds the skill by which our hands work; Thou dost pour down upon us the power and the wisdom by which alone we can do the things of this life. Bless these Thy servants, we pray Thee, as they minister to the bodies of Thy created children and grant that by Thy power their skill may be so used that it shall rebound to Thine honor and glory and to the alleviation of pain and suffering of humanity. Bless them, we pray Thee, with Thy wisdom and grant that each one may realize that he is but a representative of Thee, bestowing upon humanity that power which is from Thee and is Thine. Thou, O God, didst call Luke, the beloved physician to be the holy evangelist, the physician truly of body and of soul. Grant, O Father, that as we know him and the wholesome doctrine which he wrote and which he talked, we may follow him in his teaching and learn the things which pertain to the spiritual life which is of Thee and which is Thine. May the bodies of these Thy servants be protected and may they continue in that great work which is theirs, to Thy glory and to Thy honor and to the good of Thy people. Father hear our prayer and grant that we may ever live in Thy mercy and according to Thy will, so that when our life of today is over we may go to the great reward which is promised to all that serve Thee in this life. We ask Thy mercy and we pray for Thy grace through no merit of our own but in the name and through the merit of Him who is the Great Physician of the world in its body and soul live, Thy Son and our Savior. Amen!

ADDRESS OF WELCOME

for Hot Springs
Mr. Walter M. Ebel

Mr. Ebel: Mr. President, Officers, Members of the Arkansas Medical Society and Members of the Ladies Auxiliary: Some one who is an authority on public procedure once said that it was not advisable to begin a public statement either with an apology or regret. All of us have heard of the unwritten law. The constitutionality of that, I believe, will hold good tonight when I say that it is with sincere regret that the mayor could not be with you tonight. I regret personally that he isn't here because I wanted you to meet him and to know him and I felt sure that you would catch the spirit of enthusiasm that he reflects which after all is the enthusiasm of Hot Springs and its citizens. However, he was called away this afternoon, and he asked me to officiate in his place. So, figuratively speaking, tonight I am "pinch-hitting" for his honor, the mayor. I trust that my welcome on his behalf will be accepted by you as just as sincere as if he were here; because that is the duty that he asked me to discharge for him.

Hot Springs has looked forward with very pleasant anticipation to your convention, for the reason that we believe Hot Springs is an ideal convention city. We believe that the delegates to conventions like to come to Hot Springs. We believe with the immediate local environment here they cannot only have a very profitable convention, but also to enjoy every moment of their stay. Then, too, there was a selfish motive as to why Hot Springs wanted you, and I believe I can best illustrate that with a little incident that occurred to me personally a short time ago, when I learned that with very deep regret that a personal friend had embarked upon the lucrative but rather precarious profession of a bootlegger, and I asked him why. I was surprised and I tried to point out to him the fact that, were he to continue, it would only mean trouble, and I wanted to know what loot there was or anything in the way of compensation to lure him away from the straight and narrow path. After my little lecture, he replied that he knew that all I said was true, but, yet, he told me, that it did have its advantages, because it brought him into such close personal contact with the very best people! (Laughter). So I realized that Hot Springs knew that this convention would bring to Hot Springs the very best people.

And, then, we wanted your convention to come here for another reason: Because we knew that it would be graced by the members of your Auxiliary, an auxiliary, I understand, that is working for the upholding of the ideals of your profession; and, when we stop just for a moment to realize the progress and the important factors that women have become in the world of business and in the sciences and in the arts, we can very readily perceive that no convention, however large it may be or however important its status, would be quite incomplete unless the ladies graced the convention hall. As we look back over the records, we find today that there are something like 8,500,000 women in the country who are gainfully employed. Medical statistics, I am informed, show that the first medical woman was graduated in 1894, which is thirty-five years ago; and that today over eight thousand women are engaged in the practice of medicine, and that there are over one hundred and fifty thousand trained nurses. That is a compliment to your profession that reflects the inspira-

tion that your profession must have held out to the women to have caused them to dedicate the best that was in them and to consecrate their lives to service and, further, to also assist in maintaining the high ideals of your profession.

We wanted your convention here also, gentlemen, because we wanted you to learn something of Hot Springs, which is primarily your health resort, and so there is a closer affiliation and we believe there should be a more personal contact between you and Hot Springs than should exist between any other conventions that might come here; because here is a city that is blessed with curative hot waters in which you as physicians should be interested and which you and I believe that you all are endeavoring to ascertain the value thereof and to learn all about them and to try to give to the public the result of your research, to the end that you may build up faith and confidence in Hot Springs and also realize that the status of the city as a health resort cannot be excelled.

Yours is a profession, gentlemen, of the highest ideals. Yours is a profession where sacrifices are made. Yours is a profession that makes one and all realize the value of health, the joy of living and the unsurpassable value of youth, that teaches us to take care of our own individuals human machinery. In fact, you have made all the lame men and the lame women absolutely dependent upon you in those particular respects, and that dependency is sincere and it is genuine; it is just as sincere and genuine as the rather startling exclamation that once greeted Bob Ingersoll on a tour of the country when he was lecturing. After a very charming introduction, he stepped to the platform and began his address. As he did this, a gentlemen walked in, who was very much "in his cups," and he sat down in the rear of the hall. Mr. Ingersoll, so the story goes, said, "Now, ladies and gentlemen, if you will give me your undivided attention for about ten minutes, I think I can prove conclusively to you that there is no hell!" He hurled the words out until they rang throughout the hall. The gentlemen that I refer to turned around in his seat and he got up and looked and he said, "All right, Bob, go ahead. By God, we are dependent on you." So, gentlemen, we are dependent upon you in a more or less sense to keep us young and to keep us in good hands.

And then we wanted you here for another reason. We wanted you to know, as I said, the members of the Garland County Medical Society who not only are outstanding and upstanding men of your profession, but who also are progressive citizens, interested in the prosperity and the development and the future of Hot Springs. I know whereof I speak because I come in contact, as a newspaper man, with them almost daily. In the civic life of Hot Springs they are writing commendable history just as they are concentrating their best efforts and consecrating their lives for the furtherance of their profession.

We have looked forward to your convention also with pleasant anticipations. Now we want you to play while you are here. We want you all to have a good time. We trust that your convention from a strictly medical viewpoint will be a wonderful success, so much so that when you return to your respective homes and look back over the records that you shall make here that you will realize that it was good to have been here.

And on behalf of the mayor, I extend to you his official welcome to Hot Springs. I thank you. (Applause.)

ADDRESS OF WELCOME FOR THE GARLAND COUNTY-HOT SPRINGS MEDICAL SOCIETY

Dr. O. H. King

To Members of the Arkansas Medical Society,
Honored Guests, Ladies and Gentlemen:

By virtue of the authority vested in me by the President of our local medical organization, it is my great privilege to welcome you to this the Fifty-Fourth Annual Meeting of the Arkansas Medical Society. On behalf of the Garland County-Hot Springs Medical Society, I would express the hope that every one here will feel the inspiration of the kindly interest and the hearty welcome that is our desire to extend to you.

To those of you who are in Hot Springs for the first time I would extend an especial welcome. Our city has much to offer of interest and profit to you. We trust that every one present will avail himself of these opportunities. This is your health resort, as well as ours; we hope that your stay here will result in the joy and satisfaction that comes with the pride of ownership of something beautiful and worthwhile.

It has been frequently said that our race has been able to achieve noteworthy progress only as men have learned how to co-operate better in whatever undertaking was before them. It is our desire as hosts to become better acquainted with you, and that you may learn to know us better. In this way only can a thorough understanding exist, and this in turn, would result in a heartier co-operation. As members of a scientific body, we have assumed the task of advancing the standards in our fields of endeavor as they are related to the science and clinical practice of medicine. Our attainments must vary greatly with individual capacity, and opportunity. But each one has within himself the capacity for co-operative effort, a fact which has been largely overlooked because of the medical man's very marked tendency to individualism. By force of tradition and habit, the physician has become an extreme individualist—in the minds of the layman.

Ultra-conservative, non-communitive, self-contained, and too often self-sufficient. Through the exhibition of these very qualities which in the past have contributed in no small measure to his success, in these later years of wide-spread popular scientific knowledge, he has in some respects become noticeably alienated from the public, who are prone to misunderstand his aloofness, and what they regard as his assured superiority.

We, as your hosts, hope that we may have some small part in bringing about better understanding among ourselves. For every advance in this direction is a step toward filling that great need of a better understanding between the laity and the medical profession. The public should be taken more completely into our confidence, not only as to our achievements, but also as to the limitations of medical science, so that they may know by comparison how little can be done for them by the exponents of pseudo-medical cults, whose commercial motives and base methods should be made known to them. The people need and are entitled to receive authentic information upon all lines of personal and public health.

It is my firm belief that this, the fifty-fourth annual meeting of the Arkansas Medical Society will result in a more effective co-operation among its members, and in turn, a better understanding between the laity and the medical profession. This in itself, will make the hearts of the members of the Garland County-Hot Springs Medical Society

fill with pride because we are a component part of the State Society, and have the great honor at this meeting of being your hosts.

Again let me extend to each of you, the cordial good fellowship that we feel toward you, and also let me express the wish that many of you may visit us at times when not on official business. The members of the local society want you to know that their offices are open to you, their automobiles, are at your disposal. Those having work at the hospital will welcome you there. The bath house managers are always pleased to have visitors, and you have an especial invitation to visit the Army and Navy Hospital, the United States Public Health Service Clinic, and Free bath house, St. Joseph's Hospital, the Leo N. Levi Memorial Hospital, and the Ozark Sanatorium extend to you an invitation to visit them.

We trust that while here your stay may be profitable and pleasant.

RESPONSE TO THE ADDRESS OF WELCOME ON BEHALF OF THE ARKANSAS MEDICAL SOCIETY

Dr. D. A. Rhinehart, Little Rock

In printing the program for the meeting this year, Dr. Bathurst has kindly provided us with the names of the men who have served as president of the Arkansas Medical Society and with the names of the cities where meetings were held. From the list of the meeting places some interesting deductions may be made. As was right and proper the organization meeting was held in the Capitol City in 1875. As was also right and proper the second meeting was held in Hot Springs in 1877. The Society did not return to Hot Springs for fifteen years, meeting for the second time in this city in 1891. Then followed a second long interval, of ten years this time, the twenty-sixth meeting, (the third in Hot Springs was held in 1901). This meeting began the second quarter century of the Society's existence. From then until the present, meetings have been held here on an average of every four years. This one being the opening session of the ninth that has been held in Hot Springs, more than have been held at any other place, except the Capital City, the geographical, the railroad and also, alas! the political center of the State. (Laughter.)

One may wonder why in the first twenty-five years only two meetings were held in Hot Springs, when the record shows that in the next twenty-nine years the Society has returned for its annual gathering no less than seven times. All but a scattered few of those who could answer this inquiry from personal experience cannot now be interrogated. Perhaps those early members, in their extra-professional activities while visiting in the city, were so unfortunate as to have some unpleasant experiences; perhaps their losses of sum and substance were such that they did not care to risk a repetition, for in the early days in Hot Springs, it is a matter of history that anything detachable or separable could be easily lost.

It is also a matter of history that one of the few successful and permanent municipal and professional metamorphoses that have ever been undergone by American municipalities took place in Hot Springs, Arkansas. From a mischievous pup she has grown to a sedate, peaceful and watchful old dog; from a pupa risen out of the ground and covered with dirt there has emerged a beautiful butterfly; from a resort in the more odious use of

the term there has developed America's leading health center and one of the more popular of the national parks of the United States. All this change was brought about by the intelligent co-operate action of her citizens and the members of the Garland County-Hot Springs Medical Society.

The members of the Arkansas Medical Society now like to come to Hot Springs. We like to drive over her beautiful streets and highways; we like to drink and bathe in her health-giving waters; we like to dub at playing golf on her excellent courses, we like the spirit of her citizens, and we like to trade experiences and hobnob with her doctors. Her streets are clean, her atmosphere is pure, her bath house row is unexcelled, her hotel accommodations are beyond criticism; her medical profession contains some of the best known men of the United States, even the dew that collects on her mountain sides in the light of the moon is triple distilled and aged in wood.

And so Mr. Ebel and Dr. King, for the eighth time, we, the members of the Arkansas Medical Society for whom I am but the spokesman. We thank you for your words of welcome, we accept of your hospitality, and we feel that the excellent entertainments and professional programs that have been prepared for us will make our visit both pleasant and profitable.

The Chairman called all visitors and fraternal delegates present to approach the rostrum to be introduced.

The Chairman: Mrs. Dewell Gann, Sr., is the oldest lady here and this is her birthday. And in behalf of the Arkansas Medical Society, I want to present her a bouquet.

Mrs. Gann: I don't want you people to get any such impression that I am the oldest lady in the Society. I just happen to be the oldest one present today on her birthday. This is my sixtieth birthday. (Applause.) I have lived forty years with one man. I can never say how much I think of the medical profession. I have never met one member of it that wasn't courteous to me. I have never yet argued with any one as to who he thinks is the best man. To you, he is the best man. If you don't think my doctor is the best man, don't you have him.

Just like I told an old man when I first married. You know I am a country doctor's wife. I guess you have found that out. I like the country. We burned wood in the stoves in those days. We didn't have the conveniences that we have today with gas and electric light. So the man wanted to pay his doctor bill in wood. I suspect some of you fellows in the country know about that. I said: "If you bring me just as good a load of wood to pay on this doctor's bill as if I were paying you cash, it is alright, I will accept the wood; but first, brother, you let me see it. I am the



MRS. DEWELL GANN, SR.
Benton

cook." It looked exactly like it had been out in the wet, that he knocked up stumps here and there. I looked it over and I said "Brother you take this home and trim over it. If Dr. Gann is as sorry a doctor as the wood you brought me, I would advise you to get another physician.

So, I just feel so much at home in this medical profession. You didn't ask me to make a speech. I made it because you got me in this kind of pickle. I didn't expect to make any address.

There is something in life worth much more

than money. A great many people think money is the only thing; but that's a great big mistake. I ask the Lord every day to give me health and my friends and I will earn the money. I thank you. (Applause).

The Chairman: I want Dr. Garrison, our efficient State Health Officer, to stand up. (Applause). I want the members of the Legislative Committee and Mr. Peter Deiseh to come up here. (Drs. Vinsonhaler, Norwood, Cothorn and Majors, and Mr. Deiseh assembled in front of the rostrum.)

A year ago we were doing our best, thinking if it was possible to put Arkansas out of being the dumping ground for medicine. Arkansas was one of the last States in the Union to have any laws which would prevent any man from practicing in the State that was not qualified, and I wondered if an organization could be effected which would go to the people, and through them to the Legislature, and get a bill passed which would prevent quacks from all over the United States with no ability whatever coming into Arkansas and locating here. In other words, if we could stop Arkansas from being the dumping ground of the United States. That's just the situation that existed a year ago. The Council assisted us in every way they could. Dr. Vinsonhaler said he would be the preacher and go out and campaign the entire State, which he did. And we got Mr. Deiseh, and together with these other men and Dr. Norwood, we succeeded in getting a Basic Science Law passed after the most terrific fight I have ever seen in my life. I have never been in a legislative fight before which was as hard as the one we had, and I have been connected with the Legislature in one way or another trying to get bills passed for fifteen years. I want to say this, that Dr. Vinsonhaler canvassed this State without a cent of remuneration of any kind. At his own expense he went out like a preacher and preached all over the State, he with the help of other men succeeded in creating a sentiment which enabled us to pass the bill. The Arkansas Medical Society desires in some way to show its appreciation for what Dr. Vinsonhaler has done; so tonight we have here a set of silver we are going to give to the doctor. This is yours, doctor. (Applause).

Dr. Vinsonhaler: Mr. President, Ladies and Gentlemen: Your presiding officer has referred to me as an itinerant preacher. If I am, he is the presiding elder. (Laughter). What-

ever my efforts may have been to achieve what has happened to us in the way of passing the Basic Science Law, I can only say that they were more than supplemented by these splendid gentlemen who did all in their power to secure the favorable result. I remember, when we were on our legislative trip, to Virginia and North Carolina, we were taken out to the old church where Patriek Henry made his great address, "Give me Liberty or Give me Death." We had one member of the organization who, whether designedly or not, I don't know, said that he never heard that speech before, and thought Mr. Dabney, a splendid Virginia gentleman and orator, delivered it, and that it was original with him. He was so much impressed with it that when Mr. Dabney had finished he went up to him and said, "I am not an educated man. I can't tell you how I feel. I never heard such a speech before. And I can only go to the Scriptures and say to you, what Daniel said when he returned from the den of lions, "O King! Life forever!" (Applause).

PRESIDENT'S ADDRESS

The President's Address will be found on the first page of reading matter in this issue.

On motion, following the addresses the General Session adjourned.

"Arthritis"—Robert McE. Shaufler, Kansas City, Mo.

"Medical Economics"—Preston Hunt, Texarkana.

GENERAL SESSION

Second Day

During the Scientific Session, the following proceedings were had, Dr. Mann, President, presiding:

The Chairman: We have Dr. Preston Hunt of Texarkana, fraternal delegate from Texas.

Dr. Hunt: Mr. President and Members of the Arkansas Medical Society: I have been trying to diagnose my position in this situation. I feel like I have come home to talk to my own family. I received through the mail an appointment from the President of the Texas Medical Association to represent that association before the Arkansas Medical Society. I had to sit down a little while for reflection and determine in my own mind to which association I really belonged. Being on

the border line, men there belong equally to both State, district and county societies. After deliberating over the matter rather seriously, and realizing my limitations, I felt rather disturbed in having this appointment from the president; but I do want to say to you that he definitely assures you that the Texas State Medical Society is not only ready, but willing to stand by anything that is upbuilding and constructively progressive in co-operating not only with the Arkansas Medical Society but with all other societies with whom we justly should be associated. I want to bring to you a message of good fellowship and a full feeling of hearty co-operation. I thank you very much.

The Chairman: In our fight last winter in the Arkansas Legislature, a very bizarre thing happened. Over in Little Rock there were six members in the House and the Senate, and *one* was for our bill and *five* against it. Just think of it, in the medical center of this State, that was the condition that confronted us. And the member with whom we had the hardest tussle was a woman. She caused us the greatest anxiety. But happily as an offset to checkmate that woman, we had a woman who was a friend of organized medicine, who rolled up her sleeves and helped us fight our battles in that very great struggle that we had. Gentlemen, I am very happy to present to you this true and tried friend of ours, Miss Erle Chambers, Secretary of the Arkansas Tuberculosis Association. (Applause.)

Miss Chambers: Gentlemen: Dr. Mann almost gave me heart failure. For a moment I thought he was going to charge me with being that woman that blocked your legislation, because we get used to all kinds of confusion. I am frequently charged with being a member of the Legislature, which I am not, and that I belong to various organizations, to which I do not belong. I was so apprehensive and my heart went pit-a-pat. I thought the accusations were coming again, but I am now relieved.

I am delighted to have this, my first opportunity to meet with the members of the Arkansas Medical Society even for a moment; because there is no other group of men in the whole State that I more enjoy working with, and there is no greater pleasure that can come to our whole organization than the opportunity to do any thing we can do for you. I want

to say that I did not at any time regard that legislation as your legislation. It was your benefaction to the State; but it was distinctly the legislation of every man, woman and child in the State. That's why we were in the front ranks with you. (Applause.)

I think we have had occasion to call on you a thousand times for services individually and collectively, and we expect to keep on calling on you. The Arkansas Tuberculosis Association is your own child. As you will find by looking back at the minutes of your meeting in 1908, it was organized originally by a resolution introduced by Dr. Sweatland. Dr. Clegg was president the year of its organization. It has had varying fortunes, but always the individual doctors have helped us every time we have asked for it. I wouldn't have come in this morning, but I was here on a special mission with a member of the National Tuberculosis Association staff. We are trying to induce the National Tuberculosis Association to meet next year in Arkansas and it didn't seem to me that I had a minute to spare from my effort to convince that gentleman of the merits of Hot Springs. However, Dr. Bathurst, who was one of my bosses, got hold of me, and dragged me up here to meet you. I want to thank him and I appreciate the opportunity of saying to you that we thank you from the Arkansas Tuberculosis Association one and all for the constructive work you have done for us already.

Now, if you want to do something else extremely nice and cogent, please pass a resolution inviting the officials of the National Tuberculosis Association to hold its next meeting in Arkansas. Let them pick the town in Arkansas and the date. I thank you.

Dr. Bathurst: I would like to introduce a resolution that we supplement the invitation of the Arkansas Tuberculosis Association to the National Tuberculosis Association that they hold their next convention in Arkansas.

Seconded by Dr. Gann, Sr.

Carried.

GENERAL SESSION

Last Day

Thursday, May 9, 1929.

The General Session was called to order by Dr. Mann, the Chairman, immediately after the adjournment of the House of Delegates.

Mr. Deisch: The Council instructed me to prepare two resolutions. One of them refers to three of your professional brethren who are members of the Legislature, tendering a vote of thanks to them for their untiring patience and loyal work, day after day, at all times, until your bill was enacted into law. Dr. George mentioned here is now retired. He practiced medicine for many years. He is from Yell County.

WHEREAS, patriotic, loyal and zealous service on behalf of the people of this State should not be left to pass unnoticed, but should be called to the attention of the people in whose behalf it was performed, and

WHEREAS the evidences of merit should be given to those to whom merit is due, and

WHEREAS the loyal and patriotic conduct of our professional brethren who are now members of the Legislature of this State, was such as to challenge our admiration, and arouse our esteem, now, therefore

BE IT RESOLVED by the Arkansas Medical Society in annual convention assembled, May 9, 1929, that the earnest thanks of the Society are hereby tendered to our professional brethren who are now members of the Legislature of this State, Drs. Hardy, George and Smith, and we do assure them of our highest and most profound esteem and admiration. Future statesmen may well endeavor to follow in their footsteps.

*"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay."*

The Secretary: I move the adoption of this resolution, and it be included in our minutes and a copy be sent to each of these gentlemen.

Dr. Kosminsky: I move the adoption of this resolution.

Carried, on being seconded.

Mr. Deisch: The other resolution is as follows:

WHEREAS, the enactment of the basic science law, by the 47th General Assembly places Arkansas on a parity with the leading States of this Republic in the matter of safeguarding the health of our people, and

WHEREAS, the members of the Assembly were at all times generous and reasonable in giving us their time and attention to explain our proposal, therefore

BE IT RESOLVED, by the Arkansas Medical Society in annual convention assembled that the earnest thanks of this Society is hereby extended to those members who aided in the passage of said bill by casting their votes for it.

Dr. White: I move its adoption.

Carried, on being seconded.

The Chairman: If there is no unfinished business, I will ask the President and the President-Elect to come forward. I present

Dr. Cothorn. I am sure he is going to make a conscientious and painstaking president. Dr. Barlow was elected President-Elect. Won't you say something, Dr. Barlow?

Dr. Barlow: I have said all I care to.

The Chairman: Any new business?

The Secretary: I would like to announce the names of those selected to fill the vacancies on the State Board. They have been presented.

Second District: S. J. Allbright, Searcy; C. G. Hinkle, Batesville; E. L. Watson, Newport.

Third District: J. L. Smiley, Bentonville; W. H. Mock, Prairie Grove; J. H. Fowler, Harrison.

Sixth District: W. T. Lowe, Pine Bluff; W. G. Hodges, Malvern; J. M. Proctor, Hot Springs.

Seventh District: A. S. Buchanan, Prescott; L. L. Purifoy, El Dorado; J. J. Baker, Magnolia.

The Chairman: These names will be presented to the Governor for his selection. If no other new business, we will go to the next in order which is the selection of the place for the next meeting.

Dr. Snodgrass: On behalf of the Pulaski County Medical Society, I would like to invite the State Society to meet with us in Little Rock. We are always glad to have you and shall be delighted to have you hold your next convention in our city.

Dr. Moulton: It is somewhat presumptuous for anyone to offer another city as a place for your meeting in competition with Little Rock, whose many charms we all enjoy; but I am authorized to present to you an invitation to meet in Fort Smith, the capital of Western Arkansas. (Laughter). I represent the medical profession of Fort Smith, the Sebastian County Medical Society and the entire citizenship of Fort Smith. There are on file with the secretary numerous messages and telegrams from representatives of the Sebastian County Medical Society constrained to remain at home this year and from various civic organizations; so that this invitation that is presented to you comes from the unanimous desire of the city of Ft. Smith and is a six-cylinder proposition. By the time the meeting is held next year I predict that if you come to Fort Smith by automobile you can traverse the entire dis-

tance from any part of the State on surfaced highways and I think the journey can easily be made in automobile from any part of the State in one day. You will find as you travel in the western half of the State scenery that is unsurpassed for its beauty in any other place in the world. If you come by aeroplane, the journey will be shortened and you will find adequate airport facilities on arrival. If you come by train, you will be well accommodated, as you all know. After you reach Ft. Smith, you will find a beautiful city and a busy city of some 40,000 people. It is an industrial stronghold. It is the largest furniture manufacturing center in the country west of Chicago. It has many other industries that add to its importance. The entire city is paved. It has a united medical profession. It has three standardized hospitals. Its educational facilities you will note are excellent when you look about the city. Its churches, its public buildings, bespeak its prosperity.

I wish especially to speak of the hotel facilities. In the last two or three years, some of the established and larger hotels have greatly added to their capacity by putting up extensions providing additional rooms, so that on the day that I left Ft. Smith to come here there was being entertained in that city a convention of Rotary clubs. There were over 1,200 members in attendance for a two-day convention, and every one of that 1,200 who was registered had been provided with a hotel room. So you see at the present time the hotel accommodations are adequate; but by the time this convention meets there, if you accept our invitation, there will have been completed another large, fire-proof hotel, eleven stories high, modern in every way, containing one hundred and fifty rooms. So you see there can be no doubt what you will be well taken care of. The fact is the citizens greatly desire your presence, and you may be assured that your entertainment and comfort will be abundantly provided for. I know you will enjoy your trip, and we hope that you will accept. (Applause).

The Secretary: I would like to supplement Dr. Moulton's remarks by reading to you telegrams received from commercial bodies and civic clubs. In all my experience in the medical society, I have never witnessed so much activity, so much interest and so much evidence of a desire that we go to Fort Smith next year.

Ft. Smith, Ark., May 7, 1929.

Secretary Arkansas Medical Society
Arlington Hotel, Hot Springs, Ark.

The Sebastian County Medical Society will appreciate opportunity to entertain the Arkansas State Medical Society in Fort Smith in 1930. Fort Smith has ample hotel facilities and with the new Ward, eleven story hotel which will be completed this year will take care of every emergency. Will appreciate any effort you make to have the Arkansas State Medical Society meet in Fort Smith next year.

SEBASTIAN CO. MEDICAL SOCIETY,

Dr. J. A. Foltz, Dr. C. S. Meads,
Dr. St. Cloud Cooper, Committee.

Ft. Smith, Ark., May 7, 1929.

Secretary Arkansas Medical Association
Arlington Hotel, Hot Springs, Ark.

Our organization joins with pleasure the other civic bodies of Fort Smith in extending to the Arkansas Medical Society a cordial invitation to meet in our city next year. Your association can count on the Kiwanians doing their part in making your meeting in Fort Smith a success. Will appreciate your organization visiting us in nineteen thirty.

ALLAN HENDERSON,
President Kiwanis Club.

Ft. Smith, Ark., May 7, 1929.

Secretary Arkansas Medical Society
Arlington Hotel, Hot Springs National Park, Ark.

The Lions Club most heartily joins in the invitation extended to you to meet in Fort Smith in nineteen thirty by the Mayor, Chamber of Commerce and other civic organizations. Our city is well equipped to entertain your organization and we will gladly co-operate to make your visit pleasant and agreeable.

J. B. HABERER,
President Lions Club.

Ft. Smith, Ark., May 7, 1929.

Secretary Arkansas Medical Society
Arlington Hotel, Hot Springs National Park, Ark.

The citizens of Fort Smith will be most happy to have the pleasure and privilege of entertaining the Arkansas State Medical Society in Fort Smith in Nineteen thirty. As chief executive of the city of Fort Smith, I extend to you a most cordial invitation to hold your next meeting in our beautiful city.

PAGAN BOURLAND, Mayor.

Ft. Smith, Ark., May 7, 1929.

Dr. W. R. Brooksher
Care Secretary State Medical Association
Hot Springs, Ark.

See that noon civic club joins with all other civic clubs in Fort Smith in extending invitations to Arkansas State Medical Society to meet in Fort Smith next spring. All other telegrams including that from Mayor and Chamber of Commerce have gone forward, please see that they are read.

JAMES A. FOLTZ, Chairman of
Convention Committee Chamber Commerce.

Ft. Smith, Ark., May 7, 1929.

Dr. S. J. Wolferman
Arlington Hotel, Hot Springs, Ark.

The Fort Smith Chamber of Commerce extends a most cordial invitation to the Arkansas State Medical Society to hold its next annual meeting in Fort Smith. Every courtesy will be extended to the members of your association and its guests and the facilities of our organization will be at your call. We will gladly co-operate with you in any program of entertainment you may decide to put on during your meeting in Fort Smith. May our city have the pleasure of entertaining you during the nineteen thirty meeting.

W. T. OGLESBY, President,
Ft. Smith Chamber of Commerce.

Ft. Smith, Ark., May 7, 1929.

Secretary Arkansas Medical Association
Arlington Hotel, Hot Springs, Ark.

The Rotary Club of Fort Smith joins in a cordial invitation extended to the Arkansas Medical Association to hold its meeting in Fort Smith next year. We will gladly join with the other civic organizations in making your stay in Fort Smith during your nineteen thirty meeting most pleasant.

W. M. EADS,
President Rotary Club.

Dr. Kosminsky: I was really instructed to invite you on behalf of the Miller County Medical Society and the Bowie County Medical Society to the greatest city in the United States, called the Twin Cities, Texarkana, U. S. A. If I would begin to eulogize our city, we might keep you away from Fort Smith, we might keep you from going there and forgetting that Ft. Smith or Little Rock ever existed. But you have been kind to us. You have gone to our section of the State this year for your president, and we are going to be kind enough to withdraw Texarkana in favor of Ft. Smith. (Applause).

Dr. Snodgrass: When I invited you I had no idea that the entire populace around Ft. Smith was so much interested and enthusiastic over this matter. I don't think any of my friends ever thought of such a thing, and I shall be glad to withdraw my invitation in favor of Ft. Smith, and will urge that we go up there and see if these statements are true. (Applause.) I would like to make a motion that we cast the entire ballot for the meeting at Fort Smith.

Seconded.

The Chairman: If the added improvements which Dr. Moulton has mentioned so eogently in his address are surely in the offing, we eer-

tainly ought to go there, because I remember going through that town once and somebody showed me a gibbet where they were trying to hang everybody or had executed nearly everybody that came along! (Laughter.)

Carried.

The Chairman: I will turn the meeting over to Dr. Cothorn, our new President. (Applause.)

Dr. Cothorn in the Chair.

Dr. Cothorn: I thank you for this manifestation of esteem and for the co-operation that I know I am going to get from you during the coming year. (Applause.)

On motion, the convention adjourned, *sine die*.

MEMORIAL SESSION

First Presbyterian Church

Wednesday, May 8—8:30 to 9:30 A. M.

The Memorial Session was called to order by Dr. Don Smith, Chairman of the Committee on Neerology.

The Chairman: Ladies and Gentlemen: This hour has been set apart by the Arkansas Medical Society to pay a last tribute of respect to its departed members. We have as deceased members:

George Snider Brown, Conway, May 11, 1928.

Fred A. Hipolite, DeVall's Bluff, July 19, 1928.

Jacob L. Hare, Wynne, July 29, 1928.

Richard Calvin Lynch, Success, August 12, 1928.

Wallace Dickinson Rose, Little Rock, August 17, 1928.

Clinton A. Riee, Rogers, October 7, 1928.

William W. Riee, Prescott, October 29, 1928.

Philip Emerson Thomas, Sr., Clarendon, October 31, 1928.

James Dogan Hart, Dardanelle, December 15, 1928.

John S. McMurtrey, Rison, December 23, 1928.

George Davis Huddleston, Conway, January 3, 1929.

Charles B. Paddock, Fayetteville, January 3, 1929.

Robert Scott Crebs, Olvey, February 14, 1929.

John T. Fleming, Perryville, February 25, 1929.

Jerome Wright, Russellville, March 5, 1929.

Robert Andrew Simpson, Hot Springs, March 31, 1929.

Silas W. Moreland, Jonesboro, April 28, 1929.

Auxiliary Member

Mrs. S. C. Fulmer, Little Rock, June 28, 1928.

The Chairman: As a fitting opening, I am going to call on Bro. Stewart Oglesby for the invocation.

Invocation by Rev. Stewart Oglesby, Pastor First Presbyterian Church.

Our Father of Life, we pause to stand before them with humble hearts and living memory for those of our members whom Thou hast called to Thyself during the past year. We pause that we may acknowledge our allegiance to Thee and our dependence upon Thee in all we do. Thou art the great Physician of bodies as well as souls. Every healing stream flows from Thee. We thank Thee that we can work in co-operation with Thee in bringing health and happiness and hope to mankind. We pray Thy richest blessings upon the members of this Society and of the auxiliary, that Thou wilt protect them, that Thou wilt guide them in all that they are doing, that Thou wilt give them additional skill and more and more success in their work in banishing disease and suffering and death and bringing health and happiness and longevity to mankind. Guide us in all the affairs of life and help each one of us to be ready when the summons comes, as come it must, to appear before the Court of Judgment to give an account of the deeds done in the body. We ask in Jesus' name. Amen!

The Chairman: Now, Ladies and Gentlemen, you have heard the names of our departed dead. These occasions have always been filled with sadness to me. I remember on one occasion I had to attempt a eulogy upon the death of one of the best friends I ever had in a medical way, and it was indeed a very trying ordeal. We feel like, on account of the number that have passed away, that it would consume a great deal of time to call on some one for a eulogy on the life and activities of each one of these men; so we just planned this memorial and we will dispense with individual eulogies, unless some one present has

a particular friend about whom he wishes to say something.

The task of delivering a eulogy, as I said in the beginning, is always very unpleasant. Looking over this list I see the names of men with whom I was associated, some of them in school, and whom I respected and liked very much.

I think we are a little derelict in our attendance upon these occasions. I myself have always dreaded any sort of funeral exercises, for the reason that the doctor generally sees enough human misery and sadness and I never feel like inviting more and, yet, if every one felt as I do I am afraid at my death the attendance would be decidedly limited. So, in spite of the way we feel, we should attend these services in a body. I think the hour is a little inappropriate, as it is so early in the morning, but if we arranged a different time it would be impossible to carry out our program, which, after all, is very important.

Now, most of these men were known to me; but, whether they were or whether they were not known to me, I know they have been those who loved and served their fellowmen. When I hear of a doctor's death, I know that that man has spent his life in service; it may be under the blazing summer's sun, it may have been in the cold of winter, it may have been in the golden autumn or it may have been in the happy, laughing spring; it matters not, when he was called, he went about doing good and only when he was called up higher did he lay down his work.

Some recent poet has written a short poem that appealed to me and, if my memory doesn't play me a trick and betray me, I would like to quote it.

"Who will find a lover for Death and her only?
Though all men kiss her lips none against their will.

O pity Death for she's eccentric and lonely
And those who sleep with her lie curiously still."

Now, ladies and gentlemen, I simply quote that little piece of poetry to show to the rest of you doctors that you should not dread death. Death after all may be but perfect peace, as some one has said.

Now, we feel perfectly sure that these doctors who have passed away are at least at perfect rest. There is no need for tears perhaps for an occasion like this, no need for weeping, because it may be after all that they are better

off. Their service is ended; they spent their lives in helping humanity; and the man who does that most surely will have his reward in the hereafter.

Mrs. Rhinehart will now pay her respects to the memory of Mrs. S. C. Fulmer.

Mrs. B. A. Rhinehart: It is with deepest sorrow that we mourn the loss of our dear friend and member of the Woman's Auxiliary. Ruby Baugh Fulmer passed away June 28, 1928. She was born in Bluffton, Ark., August 19, 1892, and educated in the public schools of the State. Mrs. Fulmer graduated from Hendrix College with an A. B. degree in May, 1915, in the same class with Dr. Fulmer whom she married on May 20, 1916.

Besides her husband, Dr. S. C. Fulmer, she is survived by her mother, Mrs. W. F. Baugh, a sister and two brothers.

She was an active member of the Auxiliary of the Pulaski County Medical Society and the first of its members to pass away.

"Weep not for her for she has crossed the river
We almost saw Him meet her on the shore,
And lead her thru the golden gate, where neither
Sorrow nor death can ever enter more.
Weep not for her that she hath reached before us
The safe, warm shelter of her long loved home;
Weep not for her, she may be bending o'er us,
In quiet wonder when we, too, shall come.
But weep for those round whom the fight is
thriving

Who still must gird the heavy armor on
Who dare not pray for rest, tho sore their longing
Till all the weary working day is done.
And pray for them that they, tho sad and lonely,
May still with patience bear the cross He sends,
And learn that tears and wounds and losses only
Make peace the sweeter when the warfare ends."

Dr. Warren: Members of the Society and visitors: As Dr. Smith said, we are paying too little reverence to these occasions. Three years ago we held our memorial services in this building. At that time I came in a car with Mrs. Gann of Benton and Dr. Leonidas Kirby, of Harrison, who was a very dear and close friend of mine, and before the year ended he had passed away. I am very glad indeed that Dr. Bathurst saw fit to print the name of the ex-presidents of the Arkansas Medical Society on the back of the program. And do you know, I have the thought that Dr. Vinsonhaler is the oldest living ex-president of the Arkansas Medical Society; not probably in age, but in point of service. All of them have passed away and many who have served since his time have gone. And again I

want to say, in stressing what Dr. Smith said, that we pay too little attention, give too little thought and give too little time to these occasions when our memorial exercises are being held. For seven years we have been holding them in churches. I really think that probably it would be better, and we would get better attendance, if we held them some time during the day in our regular meeting place. True, the church is more appropriate probably, but this attendance today doesn't reflect credit on the reverence that we ought to have for our departed friends, and it is a bad showing, especially for the visitors here, knowing the number that we have in attendance.

There is only one ex-president who has died since our last meeting and that is Dr. Geo. S. Brown. He was one of the dearest, truest, noblest of characters, and I want to have something to say especially with reference to him. While he probably was not an outstanding character, yet so far as we are concerned, he was one of those members who had been active, energetic and a regular attendant of the meetings of Arkansas Medical Society.

As a rule, when a doctor dies, he is a martyr and he has given his life and gone to a premature grave, through going out at unseasonable hours in inclement weather, exposing himself to wet and cold in response to calls of distress.

I want to insist that at our memorial services next year we have a larger attendance and give more evidence of our consideration and appreciation of the good of those who have responded to the summons of the Grim Reaper.

The Chairman: We will now receive the benediction.

Benediction.

REPORT OF COMMITTEE ON HOSPITALS

A. E. Chace, M. D., Chairman

(Editor's note—This report was received too late to be read at the regular session. It shows that Arkansas has 75 registered hospitals, with capacity of 7,350 beds, 226 bassinets. Hospitals not admitted to the register, 3; capacity, 72 beds.)

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The Benton County Medical Society held its regular monthly meeting, June 13, in the

Rialto Theater, Siloam Springs. President, Dr. L. L. Seott, presided.

The scientific program was presented by Dr. H. P. Kuhn, Dr. R. C. Davis and Dr. F. Helwig, all members of the staff of St. Luke's Hospital of Kansas City, Missouri.

"The Diagnosis of Goiter Heart" by Dr. R. C. Davis.

"The Correlation of the Clinical Symptoms with Pathological Findings and Exhibition of Specimens," by Drs. Ferdinand Helwig and H. P. Kuhn.

The program, because of its excellence, unique method of presentation, and general interest was one of the most interesting the society has ever had.

Following the scientific session, a number of resolutions were passed. One of which was the acceptance of Dr. Piekens of Bentonville, as a member of the society.

A banquet was given in the evening, and was addressed by Dr. E. H. Skinner of Kansas City, Mo., on the subject: "The Acceptance of Medical Progress of the Laity: Present Trend."

During the month the society has been called to mourn the passing of one of its most faithful members in the death of Dr. W. W. Ireland of Gentry.

INDEPENDENCE COUNTY

(Reported by M. S. CRAIG, Sec.)

The Independence County Medical Society met in Batesville, Monday night, June 10, with the following present:

V. D. McAdams, Cord; S. N. Robinson, Sulphur Rock; E. M. Gray and T. J. Wood, Evening Shade; O. S. Wood, Salem; Paul Jeffery, Bethesda and R. C. Door, T. N. Rodman, M. S. Craig, F. A. Gray, Batesville.

Following dinner, the meeting was continued at the Courthouse.

The following scientific program was rendered:

"Puerperal Eclampsia," by V. D. McAdams.

"Diarrhea in Children," by O. S. Wood.

"Endometritis," by F. A. Gray.

The subjects were freely discussed along with reports of cases.

The next meeting will be held the second Monday in August.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The Mississippi County Medical Society met June 11, at Wilson. Drs. Barksdale and Ellis furnished the entertainment.

Present: Campbell and Hosey, Joiner; Polk, Keiser; Harwell, Massey and Sheddan, Osceola; Hudson, Luxora; Owen, Armored; Barksdale and Ellis, Wilson; Husband, Usrey, McCall, Tipton, McDaniel and Smith, Blytheville; Crawford, Memphis, Tenn. Dr. Coley of Memphis was a visitor.

Scientific program: "Diagnosis of Pulmonary Tuberculosis," by Dr. S. W. Coley, Memphis, Tenn.

After the business meeting, dinner was served at the Wilson Club House.

The next meeting will also be held at Wilson.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The Lawrence County Medical Society met June 3, 1929, with Dr. T. C. Neece, Walnut Ridge.

Present: Neece, Land, Henderson, Robinson, McCarroll, Guthrie, Stidham and Warren. Visitors: W. M. Majors and R. J. Haley.

The following scientific program was rendered:

"The Care of the Breast Before and After Delivery," by Dr. H. R. McCarroll.

Dr. G. A. Warren conducted an interesting quiz on Obstetrics.

The next meeting will be held at Smithville, July 9, 1929.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The Mississippi County Medical Society met at Wilson, Tuesday, July 9, 1929.

Present: Massey, Barksdale, Tipton, McDaniel, Hill, Husband, Wilson, Harwell, Saliba, Sheddan, Crawford, R. L. Johnson, Grimmer, Ellis, Hosey, Polk, McCall, Washburn and Smith.

Drs. Black and Stinson, Memphis, Tenn., were visitors.

The scientific program was as follows:

"Vincent's Infections and Their Constitutional Symptoms," L. D. Massey, Osceola.

"Toxemias of Pregnancy," by W. J. Sheddan, Osceola.

"Pellagra," N. R. Hosey, Joiner.

At the close of the program, refreshments were served, Drs. Barksdale and Ellis acting as hosts.

Book Reviews

Modern Methods of Treatment.—By Logan Clendenning, M. D., Associate Professor of Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas. With Chapters on Special Subjects by H. C. Anderson, M. D.; J. B. Cowherd, M. D.; H. P. Kuhn, M. D.; Carl O. Rickter, M. D.; F. C. Neff, M. D.; E. H. Skinner, M. D., and E. R. DeWeese, M. D. Second Edition. Published by The C. V. Mosby Company, St. Louis. Price, \$10.00.

The author of this well-balanced book presents a comprehensive statement of the best modern thought and practice upon the treatment of diseases included in the general specialty of internal medicine.

A Text-Book of General Bacteriology.—By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Ninth Edition, thoroughly revised. Octavo of 778 pages with 191 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth \$6.00 net.

This book is the outgrowth of lectures given to students in the University of Chicago during the past few years. The fundamental principles and methods of laboratory work are treated as fully as seems desirable in a book of this class.

Principles and Practice of Obstetrics.—By Joseph B. DeLee, A. M., M. D. Professor of Obstetrics, Northwestern University Medical School. Fifth Edition, Thoroughly Revised. Large octavo of 1140 pages, with 1128 illustrations, 201 in colors. Published by W. B. Saunders Company. Cloth, \$12.00 net.

Diagnosis is one of the principle features of this book, also the relations of obstetric conditions and accidents to general medicine. In fact, the author has constantly held in view the needs of the general practitioner and student. Many of the chapters have been rewritten and new illustrations supplied.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1928.—Cloth. Price, \$1.00. Pp. 75. Chicago: American Medical Association, 1929.

This book is a great deal more than a mere record of the negative actions of the Council on Pharmacy and Chemistry. It gives in full the reasons for the Council's rejection of var-

ious preparations, but it also records results of the Council's investigations of new medicinal agents not yet out of the experimental stage, and frequently contains reports on general questions concerned with the advance of rational drug therapy. All three categories of reports are represented in the present volume.

Among the reports on products that have been denied admission to New and Nonofficial Remedies are those on Sanarthrit and Telatuten, two preparations of animal tissue, of indefinite composition, proposed for use in arthritis and arteriosclerosis respectively; on Clauden, a combination of lipoids and undefined proteins, proposed for use as a hemostatic; on Hart's Alimentary Elixir of Beef, a liquid medicinal food, "fortified" with glycerophosphates; on Alucol, claimed to be colloidal aluminum hydroxide and marketed under this nondescriptive name; on Oxo-Ate and Oxo-Ate B, claimed to be the ammonium and calcium salts, respectively, of orthoiodoxybenzoic acid and marketed under these proprietary, nondescriptive names; on Terpezone, stated to be pinene ozonide and marketed with exaggerated and unwarranted claims; on Vitalipon, an unscientific and indefinite mixture of lipid claimed to be extracted from "vegetable and animal embryonic organs;" on Kalak Water, a solution containing sodium bicarbonate with many other ingredients of questionable utility, marketed under a nondescriptive name with unwarranted therapeutic claims; on Eu-Med, Aerosan Tablets, and Thyangol Pastilles, three shotgun mixtures from Germany.

Among the preliminary reports are those on Metrazol, which has now been admitted to New and Nonofficial Remedies; on Phenylaminnothanol sulphate, a newly synthesized ephedrine substitute; on Ovarialhormon Folliculin Menformon, the ovarian preparation originated by Dr. Laqueur of Amsterdam; and on Heparhone, a liver preparation.

The special report dealing with dextrose solutions containing cresol and intended for intravenous administration is a note-worthy example of the third category of Council reports we have mentioned.

New and Nonofficial Remedies, 1929, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of

the American Medical Association on January 1, 1929. Cloth. Price, postpaid, \$1.50. Pp. 488; xlviii. Chicago: American Medical Association.

This book offers a solution to the problem of the busy physician who is daily importuned by "detail" men to try the thousand and one new preparations brought out by enterprising manufacturers of pharmaceuticals. If the preparation in question is not described in New and Nonofficial Remedies, it is quite safe to refuse to try it no matter how alluring the salesman's talk. The book contains descriptions of those new preparations which, after painstaking examination, the Council on Pharmacy and Chemistry has found worthy of recognition and of trial by the medical profession. It is revised each year to bring it up to date with the best medical thought and to include the new preparations that have been recognized during the year as well as to delete those which have been found not to live up to their promise of therapeutic value.

In this edition there appears for the first time an article on liver preparations and their therapeutic use. The articles on ergot, metallic peroxides, pituitary gland, and radium and radium salts have been considerably revised. Among the new preparations which have been included in this edition are: diphtheria toxoid, which is the toxin of diphtheria so modified by treatment with formaldehyde as greatly to reduce its toxicity yet preserving its antitoxic power; metrazol, another proposed substitute for camphor; liver extract no. 343 and concentrated liver extract-Armour, for the treatment of pernicious anemia. Other newly accepted articles are: bismuth sodium tartrate-Searle, another water soluble bismuth tartrate preparation; scarlet fever toxin-P. D. & Co., another scarlet fever toxin manufactured under lease of the Scarlet Fever Commission; parathyroid hormone-Squibb, standardized by the method of J. B. Collip, and paroidin, made and standardized by the method of A. M. Hanson, both being solutions of the active principle or principles of parathyroid gland for appropriate clinical use. An important deletion is the omission of all generators charged with radium.

A new departure in this edition is a list of "exempted" articles. This comprises some hundred and thirty medicinal and non-medicinal products examined by the Council and found to be of such composition and to be so

marketed as not to require acceptance or rejection by the Council under its rules.

A section of the book (brought up to date each year) gives references to proprietary articles not included in New and Non-official Remedies. This list, in conjunction with the book proper constitutes a cumulative index of proprietary medicines, which physicians may consult when a proprietary product is brought to their attention. Physicians cannot dispense with the use of the newer remedies that are brought out each year; yet they can neither judge them on the basis of the manufacturers' claims nor have they the time or means to determine their merits for themselves. For this reason, every physician should possess a copy of this volume, which annually puts at his disposal an authoritative, up to date, and unbiased estimate of these preparations.

Clinical Medicine.—By Oscar W. Bethea, M. D., Ph. G., Professor of Therapeutics, Tulane Graduate School of Medicine; Professor of Clinical Therapeutics, Tulane School of Medicine, New Orleans, La. Octavo volume of 700 pages. Published by W. B. Saunders Company, Philadelphia. Cloth, \$7.50 net.

Dr. Bethea presents in this book the latest and most generally accepted information as to the diagnosis and treatment of about one hundred of the most common diseases coming within the province of Internal Medicine.

Neoplastic Diseases.—A treatise on Tumors. By James Ewing, M. D., Sc. D., Professor of Pathology at Cornell University Medical College, New York City, Third Edition, Revised and Enlarged. Octavo of 1127 pages with 546 illustrations. Published by W. B. Saunders Company, Philadelphia, 1928. Cloth, \$14.00 net.

The author of this book needs no introduction. His splendid reputation assures the profession of the excellence of his book. He gives the main features of the origin, structure and natural history of tumors.

The Injection Treatment of Hemorrhoids.—By Dr. Charles Conrad Miller. Published by Modern Surgery Publications, Chicago, 1929.

This book describes a treatment that may interest many physicians. The author says that external hemorrhoids are best treated by excision. The internal ones is the type most suitable for injection. Complete details with illustrations are given.

Strabismus.—Its Etiology and Treatment.—By Oscar Wilkinson, A. M., M. D., D.Sc., Surgeon in Chief of Washington Eye and Ear Hospital, Washington, D. C. Illustrated. Published by The C. V. Mosby Company, St. Louis, 1927.

This book is presented in the interest of the crosseyed child, and to impress upon the profession the importance of early treatment. The book refers particularly to the etiology, examination, type of strabismus and the non-operative and operative treatment.

Operative Surgery—By J. Shelton Horsley, M. D., F. A. C. S., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. With 756 Original Illustrations. Illustrated by Miss Helen Lorraine. Third Edition. Published by The C. V. Mosby Company, St. Louis. Price, \$15.00.

“One of the chief purposes of this book, as stated in the preface to the other editions, has always been the recognition and interpretation of the various biologic processes that attend and follow surgical operations. Undue cicatricial contraction after plastic surgery of the face is distressing and obvious, but even more serious are the strictures that sometimes follow operations upon viscera or ducts. A knowledge of the causes of cicatricial contraction may help the operator to avoid this unfortunate sequel to his surgical technic.”

Physiology of Love.—By George M. Katsainos, ph. D., M. D., 176 Huntington Ave., Boston, Mass. 1929. Price, \$4.00

This book opens with a lengthy introduction and follows with fourteen chapters on the following subjects: 1. Instinct; 2. Night Emissions; 3. How Man Loves; 4. Masturbation; 5. Moral Aspect of Eros; 6. Provocation; 7. Sodomy; 8. Eros' Nest; 9. Onanism; 10. Woman of Athens; 11. Reasons of Propriety; 12. Biological Laws; 13. Eros a Matter of Will; 14. Old Age.

On the first line of his introduction, we note that “Man is a singular creature.” More refreshing information is given later when we read “It is an unpardonable error to believe that man is a descendant of the ape.”

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WM. R. BATHURST, *Editor*
Little Rock, Ark.

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GOOD FOR WHAT AILED HIM

"I am never well—can't say why," said the patient. "I get a sort of pain, I don't know exactly where, and it leaves in kind of—O, I don't know."

"This is a prescription for I don't know what," said the doctor. "Take it I don't know how many times a day for I can't think how long, and you'll feel better, I don't know when."—Journal Tennessee M. A.


In less than 40 years the average height of Vassar students has increased nearly 2 inches. The increase in weight has been 7 pounds with a decreasing rate of increase. The average age of freshmen in 1921-1925 was eight-tenths of a year younger than in 1891-95. Notwithstanding change in costume, there has been an increase in girth of waist of only one inch. From 1896 the average number of sports engaged in has risen from 2 to 11, and the maximum number reported by any student from 8 to 22, says the U. S. Bureau of Education.

IS TREATMENT OF SPEECH DISORDERS A MEDICAL PROBLEM?

John A. Glassburg, New York (Journal A. M. A., March 23, 1929), concludes that the treatment of speech disorders is a medical problem which requires the co-operation of the pedagogue, the psychiatrist and the rhinolaryngologist. Teachers should work under the supervision of a medical director. Speech disorders may be classified under two headings: stuttering and stammering, which are synonymous, and defective phonation. Stuttering or stammering is a spastic co-ordination neurosis based on a mental conflict. The causes are predisposing, exciting and aggravating. The predisposing causes are heredity and a neuropathic constitution. The exciting causes are nervous shock and psychic insult. The aggravating causes are pathologic conditions in the mouth, ear, nose and throat. The treatment of stuttering is medical, surgical, psychotherapeutic and reeducational. Aphasia,

adenoids, abnormalities of the uvula, intranasal obstructions, tongue tie, cleft palate and harelip and deformities of the jaws and dental arches are all causes of defective phonation which require the services of the oral surgeon, rhinolaryngologist, neurologist and dentist before the teacher attempts reeducational methods.

No Starch



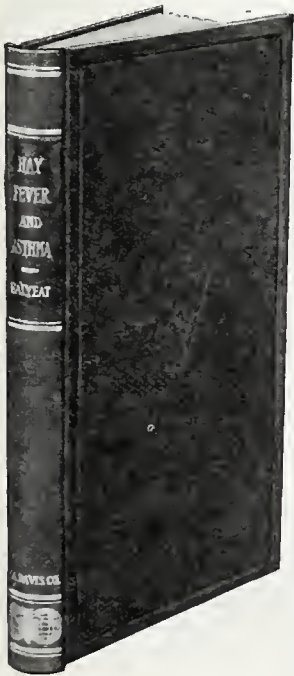
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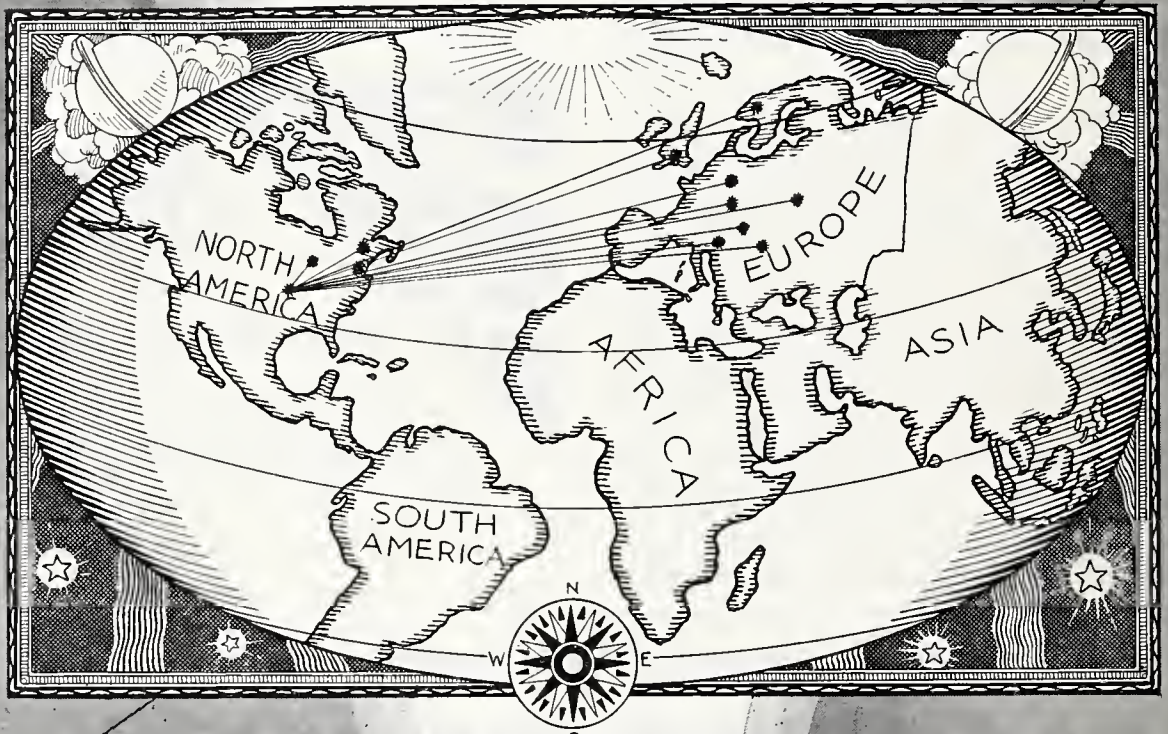
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No. 3

Original Articles

DISEASES OF THE KIDNEY*

J. C. BEARD, M. D., Pine Bluff

According to McElroy's classification, which is based upon a classification by Volhard and Fahr, diseases of the kidney may be divided into three groups:

1. Inflammatory,
2. Arteriosclerotic,
3. Degenerative.

Under the term "Inflammatory" I shall discuss The Diffuse Glomerulonephritis, which may be divided into three stages, namely:

- (a) Acute stage,
- (b) Chronic stage without kidney insufficiency,
- (c) Chronic stage with kidney insufficiency—(end stage).

ACUTE DIFFUSE GLOMERULONEPHRITIS

Etiology—The pathogenic cause of nephritis is almost without exception a bacterial infection. Tonsillitis, abscessed teeth, sinusitis, infected wounds, scarlet fever, rheumatic fever and pleurisy are very common causal factors. Exposure to cold seems to precipitate or aggravate attacks.

Pathology—The kidney is usually larger than normal, soft and flabby. The cut surface bulges. The capsule strips easily and pinpoint hemorrhages are almost always observed. The cortex and medulla are sharply differentiated.

Microscopically there is a lengthening and widening of the capillary loops of the glomerulus, anemia of the loops and an increase of the polynuclear and endothelial cells inside the loops. There may be a swelling, desquamation and proliferation of the glomerular epithelium.

Symptoms—The general symptoms are often so slight that they are frequently overlooked unless the urine is examined routinely. The patient may complain of fatigue, exhaustion, and anorexia. Sometimes there is more stormy onset with chill, fever and vomiting. There might be slight degrees of dropsy. Eclamptic uremia sometimes occurs, especially in children. There might be some dysuria or hematuria. It occurs most commonly before 40 years of age.

Physical Findings—The blood pressure is moderately increased, commonly from 140 to 160, but it may be higher or lower. This increased blood pressure is thought to be due to an increased tonicity of the arterioles produced by toxic substances.

The heart is only slightly enlarged if any. There might be a gallop rhythm or a systolic murmur at the apex.

If edema is present, it is a manifestation of nephrosis rather than nephritis, but it must be remembered that the two conditions are frequently present at the same time. This is the so-called "mixed type" nephritis plus nephrosis.

A papillitis or an albuminuric retinitis may be present, but they are more commonly found in the chronic types.

Laboratory Findings—The blood picture is essentially normal. The urine is frequently smoky due to the presence of blood. In the absence of blood the urine is usually pale. The total quantity is decreased—there might be anuria. The specific gravity is about normal. In severe cases where there is kidney insufficiency the specific gravity is low, albumin is generally present, but varies greatly in amount. Microscopically the urine shows red blood cells, casts of various kinds and frequently bacteria.

Functional Tests—The functional capacity of the kidney varies greatly according to the

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

severity of the lesion. It might be normal or it might be markedly impaired.

Among the functional tests that give us valuable information might be mentioned:

1. *The Phenolsulphonaphtholein Test*—In this exactly 1 cc. of phenolsulphonaphtholein is injected intravenously or intra-muscularly. The amount excreted in the urine within 2 hours and 10 minutes is estimated by colorimetric methods. Normally it is 50 per cent or above.

2. *The Mosenthol Test*—The urine is collected from 8 P. M. to 8 A. M. and every two hours during the day, i. e. 10, 12, 2, 4, 6 and 8 of each specimen the amount and specific gravity is measured. Normally the specific gravity varies not less than 10 points in 24 hours. The quantity should be 1200-1500 cc. in 24 hours, a low fixed specific gravity and a night polyuria (more than 600 cc.) bespeak kidney insufficiency.

Chemical analysis of the blood also gives us valuable information. Where there is an impaired kidney function there is a retention of nitrogenous products. The blood normally contains:

	Per 100 cc. of blood
Non-protein Nitrogen.....	30 to 50 m. g.
Creatinine	1½ to 3 m. g.
Uric Acid	1 to 3 m. g.
Urea Nitrogen	12 to 20 m. g.
Blood Urea	30 to 50 m. g.

CHRONIC DIFFUSE GLOMERULONEPHRITIS Second Stage

The separation of chronic diffuse Glomerulonephritis into two stages is done on a functional basis. The second stage is represented by those cases in which there is little or no impairment of kidney function.

Etiology—Since these cases arise from the acute stage the etiology is the same.

Pathology—This is the so-called "large white kidney." It is constantly enlarged, often weighing as much as 250 gms. The capsule is not adherent. The outer surface is smooth and of a grayish color. Pin-point hemorrhages are usually to be observed. The cortex and medulla are sharply differentiated. The consistency is softer than normal.

Microscopically the glomeruli are usually enlarged, often filling the entire capsule. The capillary loops contain very little blood. There is frequently a hyalization of the loops or

the entire malpighian corpuscle may appear as a hyalin body. In the intercapsular space, desquamated epithelium and coagulated albumen are to be seen here and there. There is some granular degeneration of the epithelium in the proximal convoluted tubules belonging to the most severely injured glomeruli.

Symptoms—Frequently there are no symptoms at all, the condition being discovered in routine examination for life insurance, occasionally there is a recurring hematuria. Most commonly the symptoms are fatigue, headache and dizziness or evidences of failing compensation such as dyspnea upon exertion or edema of feet and ankles noticed in the evenings and disappearing after a night's rest. It occurs most commonly under 40.

Physical Findings—There is almost always an increased blood pressure. Cardiac hypertrophy is to be expected but is less than in end stage. Edema is not an essential finding, if present it is due either to an associated nephrosis or to myocardial insufficiency. A systolic murmur over apex is commonly heard.

True uremia never occurs in the second stage.

Laboratory Findings—A mild secondary anemia is often present.

The urine usually shows a small amount of albumin, casts of all kinds and a few red blood cells. The quantity and specific gravity are about normal.

The Mosenthol test shows a normal variation, the phenolsulphonethalein output is normal and a chemical analysis of the blood shows no retention of nitrogen.

CHRONIC DIFFUSE GLOMERULONEPHRITIS End Stage

The Chronic Form with Kidney Insufficiency

The etiology is the same as that discussed in the acute stage, and like the other two types which we have just discussed it occurs most commonly before the age of 40. The great majority of these cases are the outcome of the second stage, but some of them may rise directly from the acute stage.

Pathology—The kidney may be enlarged, but it is usually small, firm, scarred and knotty. The capsule is firmly adherent. The outer surface is granular and gray. On cut surface, the contrast between cortex and medulla is not so marked as in the second stage.

Microscopically, we find completely destroyed and severely injured glomeruli along with fairly healthy glomeruli. In many areas the glomeruli are changed to hyalin clumps. In other areas the glomeruli may consist of scantily filled loops. There are also many completely destroyed glomeruli which are difficult to differentiate from surrounding connective tissue. There is some fatty and granular degeneration of the epithelium of the tubules belonging to the destroyed glomeruli. There is also some hyperplastic intimal thickening of the small blood vessels.

Symptoms—The mode of onset is often slow and insidious like that of the second stage. The disease may be latent for a number of years when the first symptoms to occur may be those of uremia, or it may be discovered accidentally. The greater number of cases are characterized by chronic general symptoms. The usual symptoms are headache, dizziness, general weakness, fatigability, nervousness and insomnia. These may disable the patient for a time and be followed by a period of freedom which is in turn followed by a return of the symptoms. This periodicity may exist for a number of years before a fatal outcome; on the other hand the end might come rapidly. Quite commonly there are symptoms of myocardial insufficiency such as dyspnea upon exertion, palpitation, nocturnal asthma or in severe cases orthopnea and generalized edema. True uremia is the inevitable outcome if life is sufficiently prolonged. Then we would expect to find weakness, exhaustion, anorexia, nausea, vomiting, diarrhea, thirst, fetor oris, muscular twitching, nervous irritability and finally coma, eclampsia uremia, i. e., uremia with convulsions rarely occurs in these cases.

Physical Findings—Toward the end there is usually a considerable loss of weight and strength. There is marked pallor. The skin and hair are dry, and the muscles are flaccid. Hemorrhages from mucous membranes are not infrequent.

An elevated blood pressure is one of the most constant findings. It tends to be higher than in the first and second stages.

With few exceptions the heart is regularly enlarged though not so markedly as in benign and malignant hypertension. The apex beat is usually heaving. There might be a systolic murmur at the apex. Arrhythmias are frequent. The edge of the liver is usually pal-

pable and there is frequently an accumulation of fluid in the serous cavities. At the end there might be a friction rub heard over the precordium indicating a pericarditis which is practically 100 per cent fatal.

Laboratory Findings—There is regularly a polyuria. The urine contains albumin, hyalin and granular casts and red blood cells. It has a low fixed specific gravity. The excretion of phenolsulphonephthalein is decreased. There is a retention of nitrogenous products in the blood, and there is usually a secondary anemia.

Papillitis and neurorinitis are commonly present.

THE SCLEROSES

The scleroses are divided into two groups:

- (1) Benign Hypertension.
- (2) Malignant Hypertension.

BENIGN HYPERTENSION

Etiology—The cause of benign hypertension is as obscure as that of arteriosclerosis in general. It occurs most commonly after 50 years of age. Some families show a tendency to develop high blood pressure, especially those of stocky build with short neck and ruddy complexion. McElroy lays special emphasis on hurry and worry as causal factors.

Pathology—The kidney is usually smaller than normal, but not always so, some of them are even larger than normal due to chronic passive congestion. Microscopically the kidneys that are not decreased in size frequently appear normal, but where the kidney is contracted the capsule is adherent and the outer surface is finely granular and red. On the cut surface the cortex is markedly thinned and red in color so that the cortex and medulla are easily differentiated.

There is a sclerosis of the small arteries and arterioles. This produces disturbances of nutrition and leads to degeneration of small areas which are frequently wedge-shaped. In these areas the glomeruli are destroyed. Those tubules belonging to the destroyed glomeruli also undergo destruction. Those portions of the parenchyma not involved in the arterio-sclerotic process remain intact.

Symptoms—Benign hypertension might exist for many years without producing any symptoms. However, the symptoms that us-

ually bring the patient to the doctor are the symptoms of myocardial insufficiency. Indeed, the cardiac symptoms stand in the foreground throughout the course of the disease. These symptoms are the same as those just described where myocardial insufficiency accompanies end stage nephritis.

Renal symptoms are not prominent.

Headaches, vertigo and fainting spells are common. Transitory aphasia, deafness, paralysis and epileptiform attacks occur. Hemorrhages from various sources are often met with.

Physical Findings—These patients often appear as if in robust health, they are active and frequently overweight with a tendency to obesity, though benign hypertension occurs in thin people also.

Increased blood pressure is one of the pathognomonic signs of benign hypertension. Most commonly the blood pressure is maintained at a more or less constant level, but under certain conditions the systolic pressure may vary up or down. Often with the onset of cardiac decompensation the systolic pressure may fall and the diastolic rise.

As a result of the hypertension the heart is regularly enlarged. The apex beat is displaced downward and outward. The pulmonary second sound is increased. There is frequently an arrhythmia present. A systolic murmur at the apex due to relative mitral insufficiency is to be expected. Aortic insufficiency due to an arteriosclerotic process is not infrequent. Of course, when there is cardiac decompensation present we would expect to find an enlarged liver, edema and an accumulation of fluid in the serous cavities.

Laboratory Findings—The urine may be entirely normal for a long time. But frequently there is a trace of albumin and a few casts present. With the onset of myocardial insufficiency we would naturally expect to find the characteristics of a stasis kidney such as oliguria, high fixed specific gravity, albumin, casts, pus cells and red blood cells. There is no anemia, no retention of nitrogen. The phenolsulphonephthalein output is normal and there is a normal variation in the specific gravity. Examination of the eye grounds shows nothing more than a tortuosity of the retinal arteries.

MALIGNANT HYPERTENSION

(Combination form, Sclerosis Plus Nephritis)

Etiology—No more is known about the etiology of this condition than about the cause of benign hypertension. It occurs most commonly between 40 and 50 years of age.

Pathology—The kidney is usually decreased in size, but it may be larger than normal. The cortical markings are completely obscured so that the limit between cortex and medulla is indistinct. The consistency is tough throughout and on section the vessels stand open.

Microscopically we find the same wedge-shaped areas of atrophy as described under benign hypertension. The glomeruli in these degenerated areas also undergo degeneration. They are more numerous and show much richer round cell infiltration. In addition to these degenerative changes other glomeruli show inflammatory changes. Sometimes the inflammatory changes in the intracapsular spaces show the half moon shapes.

The vascular changes are analogous to those described under benign hypertension except that the small and smallest blood vessels are more extensively and intensively involved.

Symptoms—The onset is usually gradual. Quite commonly benign hypertension has existed for years before the nephritis manifests itself. The cardio-vascular symptoms are the same as in benign hypertension except that they tend to be more severe. The relative myocardial insufficiency which tends to remain stationary in benign hypertension here soon passes into complete decompensation. Attacks of angina pectoris are more frequent. Arterial symptoms due to hemorrhage or transitory anemia such as aphasia, temporary facial paralysis, hemiplegia of short duration, fainting and dizziness, blindness occurs quite commonly. Cheyne-Stokes breathing is quite frequently observed.

Psychic symptoms are prone to occur. They oftentimes predominate. The patient may be nervous, irritable, unruly or violent; they are sometimes whiney and quick to cry. They are critical, dissatisfied with everything and the orders of physicians and nurses are resisted. Inability to concentrate is often complained of, fatigue is marked, comprehension is slow and drowsiness comes on.

These patients often complain of headache of migrainous type very likely due to increased

intraeranal pressure. Unless death is brought on by vascular accident, myocardial insufficiency or terminal infection, uremia is inevitable.

Physical findings—In contradistinction to the robust appearance often found in benign hypertension these patients are often emaciated and cachectic. The highest blood pressures found anywhere are met with in this type of diseases and as a rule it is persistently high. The largest hearts are also found in this type of nephropathy. Where there is a myocardial insufficiency the physical findings are as described above. If edema is present, it is of cardiac origin.

Laboratory Findings—The urinary findings vary according to the stage to which the superimposed nephritis has developed. But ordinarily we expect to find albumin, casts of all kinds, pus cells and red blood cells. There is a low fixed specific gravity. The phenolsulphonephthalein output is decreased, often 0. Nitrogenous retention in the blood is regularly found.

Albuminurie retinitis is to be expected.

DEGENERATIVE LESIONS

Nephrosis—Formerly called parenchymatous nephritis or tubular nephritis. (Time does not permit me to discuss the necrotizing nephrosis, i.e., the nephroses due to mercury poisoning.)

Etiology—The nephroses occur much less frequently than the other nephropathies. It is likely to occur at any age. In the genuine nephroses the cause is unknown. In some cases syphilis, tuberculosis and chronic suppurative processes are regarded as giving rise to the disease.

Pathology—The kidney is larger than normal. The capsule is not adherent. The outer surface is smooth and smutty in appearance. It is soft and doughy to the touch. On cut surface the cortex is widened, and the markings are obscured. In the end stage the kidney is smaller and firmer and the capsule adherent.

Microscopically the proximal convoluted tubules are widened. The epithelium of these tubules presents a honey comb appearance, some of the nuclei being well preserved and some destroyed. Fatty degeneration predominates, but there is also some hyaline and granular degeneration. The tubules are destroyed

in large areas though the glomeruli in these areas are well preserved as a rule.

Symptoms—The onset is gradual. The symptoms that usually take the patient to the physician are anorexia, fatigability, pallor of the skin and edema of eyelids and feet appearing at night in contradistinction to the edema of myocardial insufficiency which is first noticed in the afternoons and disappears after a nights rest. There is a tendency to diarrhea which might be quite marked.

Physical Findings—On physical examination the edema predominates the picture. It usually begins in the face and rapidly involves the subcutaneous tissues of the whole body external genitalia and serous cavities. The fluid has a milky, cloudy pseudo-chylous appearance. The blood pressure is normal. There is no cardiac hypertrophy.

Laboratory Findings—Unless anemia is present as a result of the causative disease the red cells are not diminished.

The quantity of urine excreted during the formation and maintenance of edema is decreased, it may be less than 500 cc. in 24 hours. At this time the specific gravity is high, from 1.025 to 1.050. As the urine increases in quantity the specific gravity becomes lower. The albumin content is high. Casts of all kinds are usually present.

The tests for kidney function show good results. The phenolsulphonephthalein output is normal. There is no retention of nitrogen. Uremia never occurs.

MEDICAL ECONOMICS*

PRESTON HUNT, M. D., Texarkana

Medical economics should, and does, play an important role in the life of every physician. First, let us consider our present practice of collecting our fees. Many of us flatter ourselves into believing we have really done an act of charity when we fail to collect a part or all of our fee for services rendered the ordinary laborer of moderate earning power and a fair sized family to support. Frequently, our lax business method has not only deprived our own family of either necessities or luxuries but it has become the first influence toward creating a deadbeat or bolshevist. We should

*Read before the 54th Annual Meeting of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

do our share of the real honest-to-goodness charity, but the majority of doctors render free a considerable part of their service on able-bodied people who, by fair co-operation on the part of the medical profession, could be induced to accept and discharge, at least, a part of their financial obligations. This would not only be fair, but it would influence the debtor in the right direction, toward honesty and good citizenship.

Let us analyze, to some extent, our professional relations with the railroads and their employees. A very large percentage of our best and most influential men are today subservient to the interest of railways and their workers. Omitting those doctors who are on full time employment, such as chief surgeons and their immediate assistants, practically every railway physician is subjugated to the interest of the railway company and its men, for an inadequate remuneration. This situation is grossly unfair on the part of the railway companies. It is either willingly or ignorantly unfair on the part of our railway physicians, and it is hurtfully unfair on the part of the employees. Let me explain this statement as follows: First, the company contracts with its employees for a stipulated financial wage, to be agreed upon by arbitration. For this wage, the employee agrees to render a specified amount of a certain quality of labor, usually measured in hours. Allow me to divert here and state that the wage now received by all railway employees is perhaps the highest received by any class of workers for the time and expense required to qualify for such services. Then, in addition to the agreement, above referred to, the railway company further bargains, as an employment consideration, to furnish the man's entire family full medical, hospital, and nursing services, including all necessary drugs. For this service, the employee pays from \$1.25 to \$1.50 per month. For legal reasons, this service is always rendered through a subsidiary organization. On account of their strong financial position, their attractive traveling facilities, plus their outstanding potential influence, the railways are able and do employ almost any physician they desire. For this professional service, a ridiculously small fee or salary, plus an annual pass is meted out to the members of our profession. There is another service expected from these railway surgeons scattered

at points of vantage along the line. I might say that this particular service is in the nature of a mutual understanding, instead of an open agreement. The implied service is for the railway surgeon to be on the lookout, at all times, for the company's interest in case of accidents, for which the railway company is, or might be, legally liable. This does not mean that the surgeon must necessarily misrepresent or minimize an injury, but simply see that the company's interest is protected without further cost.

Now here is the feature that makes the railway doctor an unfair competitor. He is favoring the railway company and its employees by selling his services for an inadequate fee. In fact, he is rendering full service, frequently to a family of five or more, for \$1.25 per month, or 25c per patient. As stated before, this service is rendered either willingly or ignorantly on the part of some of our best physicians, and I am sure that any one who has seriously considered the situation will reach a conviction that it is unfair to the rest of the profession for a part of its members to render such service to a class of men who are, or should be, well prepared to pay a reasonable fee. I am certain that any observing or visualizing man will agree that a situation of this character is very unfair and hurtful on the part of the employees. First, it is palpably unfair to the medical profession because it influences and coerces some of our best men to accept an inadequate fee, while at the same time they, the employees, through the weighty influence of their organization are demanding and receiving a fair wage and favorable working hours. A practice of this nature on the part of the men cannot possibly endure for any length of time without creating a mental slant that could be termed a demand mental complex. This mental attitude, in turn, suggests to the men and their families that their heart's desires are within their reach. This stimulates the urge and activates efforts on the part of the employees to secure, without proper remuneration, the object desired. This situation operates materially to lower the high ideals of citizenship, interferes with neighborly principles, and finally strikes a deadly blow at all that is honest, noble and upright in mankind. This naturally reacts to the hurt of the workmen.

Now let's visualize some of our own prevailing errors. I here refer to a practice that has gained a stronghold throughout our profession, fee splitting and fee slashing. It is to our shame and disgrace that the situation justifies the above observation. It should be unbearably embarrassing to a physician who loses his own respect and his sense of fairness to an extent sufficient to permit him to indulge in such unethical and unfair proceedings, for the purpose of personal gain. We know that our standard of living is much higher today than it has ever been. This naturally creates a necessity for higher salaries and greater earnings on the part of every individual, regardless of his status in life. Now for the sake of deductions, let's concede that the public demands no higher standard of the physician than of the plumber, carpenter or railway employees. For a financial starting point, let's refresh our memories with the fact, that in purchasing clothing today, one dollar buys only what fifty-seven cents bought in 1914, and in purchasing groceries, it reaches only as far as sixty-two cents would before the World War. For comparison and calculation, we shall not be far from correct if we evaluate the buying power of our present dollar in all commodities at sixty cents of its virtues in former days. Before the war, the plumber was receiving four dollars for ten hours work or 40 cents per hour, which was his unit of labor. He now receives \$1.50 per hour, which if reduced to a comparative purchasing power of former days amounts to an actual increase of two and one-half times, or 250 per cent increased purchasing power for his unit of labor. The carpenter, who formerly received 25 cents per hour has increased his wage exactly 400 per cent, while the average railway employee has secured an equal increase. This represents an increase in buying force of two and two-fifths or 240 per cent over his former earnings.

What has the medical profession done in this time? Let us assume that we formerly received one dollar for office and two for residence visits, and that we are now collecting \$2.00 for office and \$3.00 for residence visits. We are today receiving the equivalent in former values for office \$1.20 and \$1.80 for residence visits. This would represent and increase of 20 per cent for office and a loss of 10 per cent for residence service.

Of course, the fees in different locations vary materially for similar service, but for comparison, let's presume that we are now charging a fee of \$35.00 for O. B. cases, whereas we formerly charged \$25.00. Thirty-five dollars today represents exactly \$21.00, in former values, or a net loss of about one-fifth or twenty per cent of our former fees.

Our surgical receipts, under our present system, would be difficult to estimate, but for calculating purposes, let's say we are collecting \$150.00 for laparotomies today (which we are not doing) and that we collected only \$100.00 before the war. Under these fees, we would be losing a net 10 per cent of what we formerly received. Reduced to cold facts and figures, this means, gentlemen, that we are today laboring for, from ten to twenty per cent less than we earned, when we lived and prosecuted our work on an expenditure of forty per cent less than is required at present. In other words, instead of increased earnings, we are struggling along on approximately a forty per cent reduction, compared with our former receipts. If the foregoing assertions are true, and they are, barring errors in information and calculation, is there a physician in this audience who could be so blind to the interest of all concerned as to be without desire or willingness to join in an effort to correct the situation? Do you believe our citizens, composed of open-minded laymen, professional and business people would oppose or even object to a fair adjustment of this situation? If the answer were left to me, I would say no! provided the medical profession first renounced its own shortcomings, corrected its internal grievances and put its house in order for a fair and honest rectification.

SURGICAL TREATMENT OF BRONCHIECTASIS*

J. K. SMITH, M. D.
Texarkana, Ark.-Tex.

Modern surgical treatment has given the sufferer of Bronchiectasis a ray of hope. These poor unfortunate individuals have in the past gone from physician to physician without being given any hope of relief. Bronchiectasis is defined as a dilated bronchus attended by

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paroxysmal attacks of coughing with a fetid muco-purulent expectoration.

The cause is not so well understood, but no doubt the chief cause is infection which destroys the normal elasticity of the bronchi, this attended with the normal negative pressure of the lungs causes a dilatation of the weakened portion of the bronchi. That the positive pressure produced by coughing has much to do with the production is doubtful. Carrying out the idea that infection plays an important role in its causation is the fact that following an epidemic of influenza an increased number of these cases are found. When once the disease is established the negative pressure of the chest tends to increase rather than cure the condition, unlike a lung abscess it does not have the same tendency to spontaneous cure.

The pathological changes show a dilated bronchi, either in its entire length or it may be sacculated. The normal elastic tissue is replaced by fibrous tissue, the mucus membrane shows evidence of chronic inflammation and gives off an abundance of secretion which becomes infected with spirocheata and pus organisms from the mouth which produce a very fetid odor to the discharge. The spirocheata is no doubt ingrafted on the infected process and does not actually produce the disease.

The symptoms are that of chronic bronchitis; i. e., a chronic cough with the expectoration of from one to many ounces of muco-purulent material each day, usually paroxysmal in character, and which is usually favored by the position of the patient in this respect resembling lung abscess.

The physical findings are comparatively negative as compared to the other symptoms of the disease, if dilatation is very great it may have the physical findings of cavity formation, many of these cases are diagnosed as tuberculosis. The patient is usually in poor general health with rapid pulse, and loss of weight, the attacks may have recessions, at times getting better and then worse, and again we may have a very mild type of the disease which does not produce many symptoms and are diagnosed chronic bronchitis. We can anticipate many varieties, varying from a slight dilated bronchus to the more severe form of the disease.

The diagnosis can usually be made by the symptoms and the history, particularly the

periodic coughing with a periodic discharge of fetid muco-purulent sputum. The x-ray alone is of little value as a diagnostic agent, marked advanced cases may some times show only slight x-ray change, but since the discovery of lipiodin the diagnosis is more certain and sure when the x-ray picture shows the dilated bronchi, filled with the iodine compound, this distinguishes it from unhealed lung abscesses. Without going into details about the application of the iodine preparation, we wish to say we usually inject it into the glottis with a laryngeal syringe, having the patient inspire during the injection. However, this like many other techniques, one had better master one and adhere to that, as many methods may give equally good results.

Treatment: First prophylactic; all cases of influenza which seems to hang on should be given prompt suppurative treatment, tonic, fresh air, and good substantial food, and should the cough and abundant expectoration continue, the affected side should be strapped thoroughly lessening the negative pressure of the chest, or if persisted in, artificial pneumothorax should be given to the patient, which will promote healing before tissue destruction has taken place. Mild cases when once established may be benefited by the use of lipiodin installation into the bronchi by the same method as used for x-ray examination or the emulsion of iodoform may be used in the same manner.

The cases are no doubt much benefited for a time as is noted by the lessening of the amount of sputum as well as improvement in the characteristic odor of the discharge, but the treatment is usually beneficial for a short time and should be limited to mild cases, having no lasting effects and as a permanent treatment is of little value. The aspiration of the discharge by the way of the bronchoscope with direct application of remedies to affected parts has met with some favor. This form of treatment has as its objection that it takes a highly trained specialist and then it is only treating the results of the disease and does not remove the cause. It is doubtful if any mode of treatment will eradicate the disease when once thoroughly established, with the exception of lobectomy which does not have an indication except in small number of cases; besides it is a very radical procedure and like bronchoscopy requires a well trained lung surgeon and

then it is attended with high mortality. Divulsion of the phrenic nerve will offer some relief to those of a mild type, especially those in which the lower lobes of the lungs are involved, and may be of great advantage as a temporary procedure to give relief and improvement of the patient until he is able to withstand the more radical operation.

The operation which offers the most permanent relief and which is the safest to perform is external thoracoplasty which lessens the size and shape of the thoracic cavity thereby lessening the negative pressure of the lungs and vertically closing up the bronchial dilatation squeezing out the pus from it. The advantage of this operation, which also has its application in other diseases of the lung, such as tuberculosis with plural adhesions which prevents the induction of pneumothorax as well as an abscess which has destroyed a great part of the lung tissue. It can be performed under local anesthesia and if the procedure, as has been recommended by injecting alcohol in the intercostal nerves, has the effect of prolonging the anesthesia and making the post-operative period free from pain and discomfort. As it can be performed in stages, taking out just as many ribs as the patient is able to withstand without much shock, which if performed in this manner is practically nil.

I wish to report one case. Mrs. W—Age, 34, white, female. Chief Complaint: Cough with fetid expectoration, loss of weight, loss of appetite, weakness.

Present Illness: History of present illness dates back to eight years ago when she had a very severe case of pneumonia following influenza, was in bed for several weeks, has expectorated enormous quantities of foul smelling sputum since that time, at present complains of the following: headache, vertigo, slight deafness, dry throat, loss of memory, tires easily, palpitation on climbing stairs, etc.

Past History: All diseases of childhood, rheumatism, convulsions during childhood, she does not know the reason of them, influenza,

pneumonia, very easy to contract colds, had infection during childbirth, in bed three weeks, very ill.

Marital History: Menstruation began at 15½ years, not regular, three days duration, profuse discharge, painful, last menstruation, February 20, 1928, no vaginal discharge between periods, mother of four children, one dead, no miscarriage.

Physical Findings: Skin moist, eruption, probably due to drugs, superficial lymph nodes all enlarged, eye, ear, nose and throat examination negative, tongue coated, caries and decayed teeth, severe pyorrhea, the throat symmetrical no cervical ribs, no spinal curvature. Lungs: Examination shows diminished expiration no marked dullness, vocal fremitus, increased rales, constant, large and moist, some crepitant and sub-crepitant, breath sounds exaggerated over left lung, voice sounds increased, no friction note heard. Heart: Apex beat 7 c. m. for mid sternal line and fifth interspace, right border in fourth interspace 2 c. m. to right in mid sternal line, pulse 110 regular blood pressure 90 over 50, some dyspnea, arteries not thickened, abdomen negative knee reflexes normal, and equal.

Operation was performed on the 13th day of June. Temperature 98, respiration 18, pulse 96 at the time of operation. A triangular incision was made under local anesthesia, with the apex at angle of scapula and base of triangle at line of last dorsal vertebra, muscles resected from the ribs and cleared of periosteum, posterior portion of 6th, 7th, 8th and 9th ribs removed, ribs were sutured together with kangaroo tendon, muscles closed with plain catgut, chest strapped tightly to help remove strain. Operation time consumed one hour and fifteen minutes. Patient left hospital in good condition in fifteen days with the amount of sputum very much reduced and the odor practically gone. This patient, however, died about four months later with another disease making further study of her case impossible.

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Editorials

ATTENTION COMMITTEEMEN!

The attention is called to the duties of those members of the Arkansas Medical Society who have been appointed to the various committees by President Cothern. We suggest that they first read the by-laws of the Society, Chapter 8, page 19, and if additional information is needed it will be furnished gladly by the President or Secretary. The complete list of the personnel of the committees is as follows:

Scientific Program—R. J. Calcote, Chairman, Little Rock; D. W. Goldstein, Fort Smith; Geo. B. Fletcher, Hot Springs; H. T. Smith, McGehee; Wm. R. Bathurst, Little Rock.

Scientific Exhibit—W. R. Brooksher, Jr., Chairman, Fort Smith; Herbert Moulton, Fort Smith; Chas. E. Oates, Little Rock; H. E. Longino, Texarkana; E. D. McKnight, Brinkley.

Medical Legislation—M. L. Norwood, Chairman, Lockesburg; F. Vinsonhaler, Little Rock; W. M. Majors, Paragould; C. S. Holt, Fort Smith; S. W. Douglas, Eudora; E. E. Barlow, Dermott.

Student Loan Fund—E. F. Ellis, Chairman, Fayetteville; G. A. Warren, Black Rock; Morgan Smith, Little Rock; R. H. T. Mann, Texarkana; Wm. R. Bathurst, Little Rock.

Necrology—W. M. Gibson, Chairman, Nashville; J. M. Lemons, Pine Bluff; D. C. Walt, Little Rock; J. O. Rush, Forrest City; Flim D. Smith, Blytheville.

Cancer Control—Dewell Gann, Jr., Chairman, Little Rock; J. C. Hughes, Hoxie; Don Smith, Hope; Earle Hunt, Clarksville; J. S. Wilson, Lake Village.

Infant Welfare—A. C. Kirby, Chairman, Little Rock; J. S. Jenkins, Pine Bluff; H. H. Niehuss, El Dorado; H. A. Ross, Arkadelphia; E. J. Horner, Jonesboro.

Hospitals—J. W. Walker, Chairman, Fayetteville; Homer A. Higgins, Little Rock; L. M. Lile, Hope; P. W. Lutterloh, Jonesboro; O. J. T. Johnson, Batesville.

Publicity—S. F. Hoge, Chairman, Little Rock; O. H. King, Hot Springs; W. P. Cooksey, Magnolia; J. T. Palmer, Pine Bluff; Thomas Douglass, Ozark.

The above list will be published on the editorial page of each issue of the Journal, not only for the information of the members of the committees, but that the entire membership may know who are responsible for the activities of the Society.

ON A RISING TIDE

There never was a time in the history of the Arkansas Medical Society, in more than half a century of its existence, when it was at higher tide. There is increasing interest and activity in county societies throughout the State and the State Society is really accomplishing things, not only for the benefit of the Society, but for the health and welfare of the public. The best example of the Society's new power is in the passage of the Basic Science Law enacted by the recent Legislature. For many years, obtaining needed legislation was up-hill work. It was difficult indeed to obtain adequate appropriations for the State Board of Health. It was hard work to persuade law-makers that legislation asked for was not in the personal interest of the physician rather than in and for the public welfare. Especially was this attitude in evidence when legislation was asked which would keep out of Arkansas graduates of fake medical colleges, long since barred by other States. The law-makers seemed to be imbued with the idea that all such legislation was asked for in order to establish a monopoly in the interest of one school of medicine, whereas, the real object was to protect the public from incompetents and fakers.

However, a change has come about. The regular profession has gained the confidence of the public and of the law-makers and the passage of the Basic Science Law will do more to correct irregularities and bar incompetents and faddists than any measure ever passed in the interest of the public health.

We have said that the society never was at a higher tide than at present, this is not to say we have reached actual high tide, it will continue to rise, according to all indications. The programs at the annual meetings grow each year in interest and educational value, the first day's Clinical Session being one of the new factors which go to make the meetings more attractive. Distinguished speakers of na-

tional fame have been secured to deliver addresses and contribute papers. These factors and other items have naturally increased the overhead cost of the annual meetings, and to meet this it has been found necessary to increase the annual dues from three to five dollars. To the individual member this is a mere bagatelle. Three dollars a year averages twenty-five cents a month: The increase is a matter of only fifteen cents and a fraction per month more. But trifling as the increase is to the individual member, the aggregate amounts to a tidy sum which will insure not only a continuance of present high standards, but even still better programs and achievements.

We hope our members will continue their loyal support. We feel sure that they will and that the Society will increase in strength of numbers and influence and continue to demonstrate its value as a factor in the welfare of the public as well as to the individual member and the profession generally.

Abstract

AN UNAPPRECIATED CAUSE OF CHRONIC BRONCHITIS

Following the bronchographic examination of a large number of patients suffering from so-called chronic bronchitis, evidence of bronchial dilatation was found by Alton Ochsner, New Orleans (Journal A. M. A., July 20, 1929), in more than 90 per cent of the cases. He says that cases of chronic bronchitis lasting over a period of months or recurrent attacks of acute bronchitis should be given the advantage of a bronchography. The introduction of iodized oil into the tracheobronchial tree is of distinct therapeutic value not only in those cases of chronic bronchitis and recurrent attacks of acute bronchitis but also in the cases of definite bronchiectasis with large amounts of foul sputum. The method used for introducing the iodized oil into the tracheobronchial tree should be simple; it should not require a great deal of technical skill; it should be easy to carry out, harmless and not unpleasant for the patient. This is best accomplished by the passive technique.

Abstract

PRESENT DAY TREATMENT OF GONORRHEA IN MALE

Howard S. Jeek, New York (Journal A. M. A., July 27, 1929), asserts that the present-day methods of treating gonorrhea are still largely the methods of a decade ago. Comparatively few new drugs and treatments have been added to the therapeutic armamentarium. Of the new remedies employed as urethral injections, aeriflavine is the most prominent. Mercurochrome is of value in chronic posterior urethritis as an instillation. The older organic silver preparations, viz., mild silver protein and strong silver protein, have by no means been supplanted. Potassium permanganate is still used widely and there is no indication that it will be shelved in the near future. Very acute gonorrheal urethritis is best treated by omitting all local treatment. In the average case, sounds and the complement fixation test are better criteria of cure than the culture. Treatment of the acutely inflamed urethra by injections is safer than by forced irrigations. Prostatic massage should be performed neither too vigorously nor too often. The small meatus and the long prepuce are significant factors in a prolonged urethritis. Methenamine in uncomplicated gonorrheal urethritis is worse than useless. The value of vaccines is questionable. Given for their specific effect, they apparently exert a favorable influence in certain types of chronic gonorrhea and the gonorrheal metastatic infections. Their employment to produce a foreign protein reaction is not without danger. The status of diathermy is not yet established. Some observers state that they have had brilliant results with it while others are seemingly not impressed by its virtues. The results of mercurochrome, metaphen, sodium iodide, diathermy, a proprietary sterile milk and autoserotherapy as tried out in the complications of gonorrhea at Bellevue Hospital have been disappointing.

Personal and News Items

Dr. W. P. Scarlett of Russellville was a recent visitor to Little Rock.

Dr. T. M. Mitchell of Mountainburg has moved to Rudy, Arkansas.

Mrs. C. W. Garrison, Little Rock, was elected chairman of the Legislative Committee of the Woman's Auxiliary of the American Medical Association at its recent meeting in Portland.

The American Medical Association is the one organization that every physician who lives and honors his profession should be united with, and its ethical principles should be emotionalized as the only means of giving reality to its ideas and its ideals—M. L. Harris.

Dr. Gordon Hastings, former director of the public health unit of Union County, who was recently appointed supervisor of rural sanitation work in Arkansas by Dr. L. L. Lumsden, surgeon in charge of co-operative public health work, United States Public Health Service, Washington, D. C., has assumed his new duties at public health headquarters at Little Rock.

At the meeting of the Ninth Councillor District which was held in Harrison, July 10, the following officers were elected:

President, J. G. Gladden, Western Grove; First Vice President, D. L. Owens, Harrison; Second Vice-President, J. C. Blackwood, Harrison; Secretary and Treasurer, J. R. Fowler, Harrison.

Dr. A. B. Williamson has moved from Chickalah to Alpin, Arkansas.

Dr. Amedee Granger, director of the x-ray department of the Charity Hospital, New Orleans, announces that the Board of Administrators of that institution has established a Fellowship in Radiology. Particulars may be had by writing Dr. Arthur Vidrine, Supt., Charity Hospital, New Orleans, Louisiana.

Dr. and Mrs. L. L. Purifoy of El Dorado recently visited their daughter in Little Rock.

Dr. and Mrs. G. W. Fletcher of Montrose returned recently from an extended visit to the Pacific Coast, returning by way of Portland and Chicago.

Dr. R. L. Sadler, Little Rock, is visiting in Chicago, where he is attending the clinics.

Dr. Dewell Gann, Jr., Little Rock, recently returned from a visit to Rochester and Fort Snelling, Minnesota. While at Fort Snelling he demonstrated a new method of loading an army litter.

Dr. Joe Shuffield, Little Rock, has recently returned from a visit with his mother in Nashville, Arkansas.

Dr. and Mrs. W. R. Hunt, Clarksville, and Dr. and Mrs. W. M. Horner, Coal Hill are at the Mayo Clinic.

Dr. John S. Waddle of Hope, Arkansas, died July 11, 1929, aged 80. Dr. Waddle was a graduate of the University of Louisville, Kentucky class of 1878.

Dr. Pauline Tenzel announces the opening of her office for the practice of diseases of children at 840 Donaghey Building, Little Rock, Arkansas.

The Basic Science Board held its first meeting July 29, at the Department of Education, State Capitol, Little Rock. Officers elected were: M. J. McHenry, Hendrix College, Conway, Chairman; Louis E. Gebauer, Bacteriologist, Little Rock, Secretary; S. C. Dellinger, University of Arkansas, Fayetteville, Treasurer.

Other members of the Board are: E. L. Whitsit, Dean of the First District Agricultural and Mechanical College, Jonesboro; D. A. Spessard, Instructor in Science at Ouachita College, Arkadelphia; C. M. Hirst, State Superintendent of Public Instruction.

The board discussed questions in connection with its duties as outlined in Act No. 147 of 1929, which created the board.

Dr. Sloan M. Sanford announces the opening of his office, 619-620 Donaghey Building, Little Rock. Practice limited to diseases of the eye.

Obituary

IRELAND, WILLIAM WESLEY—Dr. W. W. Ireland of Gentry, died June 17, 1929. Aged 73. He is survived by his widow and several children.

REPORT OF NATIONAL AUXILIARY MEETING

Among the 190 members present at the A. M. A. Auxiliary meeting, held in Portland, July 8-11, three were from Arkansas. Mrs. C. G. Hinkle, Mrs. W. R. Brooksher, Jr., and Mrs. C. W. Garrison.

Mrs. Allen H. Bunce, President, in her address gave thanks to the journals of Arkansas and North Carolina—the only two Medical Journals which had given recognition to the National Organization. There are now 33 States which are organized. A nice compliment to Arkansas Auxiliary was that Mrs. C. W. Garrison was appointed chairman of the Legislative Committee.

Among the social features were a luncheon at attractive Chalets, along the Columbia river highway, a night horse show at the country estate of Mr. and Mrs. Aaron Frank, a garden party reception and tea and "Fir Acres," country home of Mr. and Mrs. Lona Frank and a Salmon Barbecue at Mt. Tabor Park.

Portland proved to be a most gracious host. Every courtesy possible being extended the visitors.

Referring to a diagnosis of "intestinal flu" sometimes made by the younger and therefore (Supposedly) better educated members of the profession a man of authority in the medical profession recently said: "For the laity this may mean a satisfactory diagnosis, but used by physicians it is commonly an acknowledgment of ignorance or uncertainty of the true nature of the illness." Let us hear no more about "intestinal flu."—Nebraska State Medical Journal, July, 1929.

At the 1929 Annual Session of the American Medical Association the House of Delegates, recognizing the dangers of toxic gases used in industry and in the home, asked the Board of Trustees to appoint a committee to look into the situation and to advise the medical profession and the public for the good of the public health. In the meantime additional deaths from the use of methyl chloride in mechanical refrigeration have occurred in Chicago as determined by a special coroner's jury, which has recommended the discontinuance of the use of methyl chloride as rapidly as possible, the temporary use of warning gases with methyl chloride until substitution of some less hazardous gas shall be made, and a definite warning by manufacturers to users of such apparatus as to the hazards involved. (Jour. A. M. A., July 27, 1929, p. 288).

MEDICAL LICENSURE

The requirements for the practice of medicine of the different States, whether by regulations of the respective State boards or by actual incorporation of the requirements in the medical practice acts, have been a most important factor in elevating the standards of medical education and in securing standardization at the higher level. Recently, however, they have presented the most serious difficulties in securing modifications of medical teaching in keeping with sound educational progress, partly because different States insist upon different requirements, and while all the different boards agree that uniformity and standardization of medical education is necessary, they have not been able to agree on uniformity in their own procedures. Another point of interest also is that while these efforts have been highly successful in elevating medical training to proper standards, the effort to provide practitioners of high quality is nullified in part by the public and legal recognition of many forms of sub-standard practice of the healing art.

To help correct the last condition, Connecticut, Nebraska, Minnesota, Wisconsin and Washington have established basic science boards whose functions are to examine the educational qualifications and fitness of all candidates for licensure to practice the healing art (except Christian Science healers) and to conduct examinations in the sciences basic to all the branches of healing:—anatomy, physi-

ology, pathology, diagnosis and bacteriology. Other States are contemplating such laws but there is a growing opposition to what is essentially a political compromise and the legal recognition of multiple standards of diagnosis, pathology and treatment. At the recent meeting of the Federation of State Medical Boards, this problem received special attention. The fact that 96 per cent of the candidates appearing before these basic science boards are graduates of class "A" medical schools and that they must submit to further examinations conducted in the sciences without relationship to clinical problems is carrying a compromise to the point of penalizing well-trained physicians without much insurance of protecting the public by so doing.

The small number of non-medical candidates passing the basic science board examinations has been interpreted to mean that these examinations have been effective in keeping irregular practitioners out of the States with such boards. One reason for this situation is that the basic science boards have prescribed the preliminary education, which any sound single standard practice act should do, and consequently very few candidates who have not taken a medical course can meet the educational requirements of these boards and hence cannot appear for examination. The number of cult schools and of students is declining rapidly, as suggested in these figures:

Schools	1920	1927
Osteopathy	13	8
Chiropractic	79	40
Naturopathy	20	12
Optometry	18	8
Chiropody	9	7
Physical Therapy	32	21
	171	96
	— <i>Exchange</i> .	

THE NOVEMBER MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

November is the month of rapidly changing weather, grey skies, and frequently of respiratory infections for most of the inhabitants of the United States. But those who dwell in the Southern part of Florida know only balmy days and sunny weather in November. While the rest of the world carries its overcoat and umbrella, visitors to Miami don their summer

clothes. They go out into the Gulf stream off the Miami coast, in a sail or row boat or what may be available, to catch brilliant colored fish, tarpon, amberjack, kingfish, sail fish, and many other beautiful tropical monsters.

Those who are planning a trip for the year will do well to recall the charms of Miami in November. One may play golf on the beautiful links of the City, and then take on a stimulating plunge in the surf. One may step into an airplane and head for Havana, Nassau, or for the remote corners of Central America; since in the Miami district flying has progressed as extensively commercially as it has abroad.

The railroads will offer special reduced rates for visitors to the Southern Medical meeting from all parts of the South, and schedules will be conveniently arranged so that those who must make their stay brief will be attracted.

The programs of the general meetings and sections promise to be the most complete and practical that have yet been offered. Nowhere can a physician's improvement be better combined with pleasure than in Miami, November 19-22, 1929.—*Jour. Southern Med. Asso.*

County Societies

POPE COUNTY

(Reported by W. P. SCARLETT, Sec.)

The regular meeting of the Pope County Medical Society met with the Yell County Society at Chickalah, July 11, 1929.

A delicious chicken dinner was served in the basement of the Methodist Church.

The following program was rendered:

"The Necessity of Co-operation Between Physicians and Health Officers." Special stress was placed on typhoid immunization. By Dr. J. T. Pool of Ola, Yell County Health Officer.

"The Importance of Reporting All Contagious Diseases." By Dr. A. B. Tate, Pope County Health Officer.

"How Physicians and the Laity can Aid in Health Work." By Dr. Roy Millard, Dardanelle.

"Relation of the Physician and Public, Stressing the Importance of Preventive Medicine." By Dr. R. L. Smith, Russellville.

"Pay the Doctor." By Dr. Ben Williamson, Alpin.

Sixteen wives of the doctors were present and a motion was introduced by Mrs. A. W. Rye to organize a County Auxiliary. They voted to organize at the next meeting of the Society, which will be held in Russellville, August 8, 1929.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular monthly session Thursday night, August 1st, at the Camden Hospital. The Society was the guest of the hospital. A delightful banquet was served by the nurses of the hospital.

The program consisted of two very interesting talks by Drs. S. C. Fulmer and E. H. White of Little Rock. Dr. White spoke on "Pelvic Measurements in Obstetric Practice" and Dr. Fulmer spoke on "Insulin."

Dr. G. F. Hollingsworth, a recent graduate of the University of Arkansas Medical School, who has located in Camden was elected to membership in the society.

Physicians present at the meeting were: Rinehart, Early, Powell, Jameson, McGill, Hollingsworth, Worthington and Robins of Camden; Purifoy and Rushing of Chidester; Sam Thompson and N. G. Partee of Stephens; Kennerly and Smythe of Bearden; Ritchie of Ogemaw; Plunkett of Elliott; Rhine of Thornton; Newsom and Prof. Dew of Louann; White and Fulmer of Little Rock.

Dr. R. B. Robins will entertain the Society at its next meeting, September 5 at the Camden Country Club.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The Lawrence County Medical Society held its regular meeting, August 13, in the High School Park, at Portia. Dr. W. J. Robinson was host to the Society.

The following program was rendered:

"Quiz on Typhoid Fever" by Dr. C. C. Ball, Ravenden.

"Typhoid Fever" by Dr. W. W. Hatcher, Imboden.

After the scientific program, some of Portia's famous watermelons were served.

Book Reviews

Diseases of the Skin—By Richard L. Sutton, M. D., Sc. D., LL.D., F. R. S. (Edin.), Professor of Diseases of the Skin, University of Kansas School of Medicine; Member of the American Dermatological Association; Dermatologist to the Sante Fe Hospital Association; Assistant Surgeon, United States Navy, Retired. With 1,237 Illustrations and 11 Colored Plates. Seventh Edition, Revised and Enlarged. Published by The C. V. Mosby Company, St. Louis, Mo.

This book gives the very latest developments in cutaneous therapy, and is generally recognized as one of the outstanding works on dermatology.

The Treatment of Fractures—By Lorenz Bohler, M. D., Chief Surgeon and Director of the Vienna Accident Hospital. Authorized English Translation by M. E. Steinberg, M. S., M. D., of Portland, Oregon. With 234 Illustrations. Available through Wilhelm Maudrich, Medical Bookseller, Publishing Dept., Vienna. Price, \$5.00.

Quoting from the translators preface to the English edition, he says, "This book is essentially a record of the author's vast and intensive experience. He has not followed the beaten path, but courageously analyzed and criticised some of the orthodox methods in vogue and advanced his own theories and technique. The hundreds of surgeons from various lands, who have visited Dr. Bohler's clinic at the Accident Insurance Hospital of Vienna have been convinced by the rationality of his teachings and impressed with the brilliancy of his results.

At this time, when so much interest is displayed to advance the treatment of fractures and to find more uniform and better methods, this book should meet with a favorable reception. The translator has attempted to convey the original ideas of the author by strictly adhering to the text.

Diabetic Manual for Patients—By Henry J. John, M. A., M. D., F. A. C. P., Maj. M. R. C., Director of the Diabetic Department and Laboratories of the Cleveland Clinic. Published by the C. V. Mosby Co., St. Louis, Mo. Price, \$2.00.

This book contains practical data to guide the diabetic patient. The treatment and value of diet is given especial attention. The book closes with a chapter showing various food receipts for the diabetic patient.

Blood and Urine Chemistry—By R. B. H. Gradwohl, M. D., Director of the Gradwohl Laboratories, St. Louis, Mo., and Ida E. Gradwohl, A. B., Instructor in the Gradwohl School of Laboratory Technic, St. Louis, Mo. With 117 Illustrations and 4 Color Plates. Published by The C. V. Mosby Company, St. Louis, Mo. Price, \$10.00.

This well known author presents another textbook for laboratory workers and practitioners in medicine. He gives the technic of blood and urine chemistry in the simplest style, the calculations in the proper form, and a full explanation of the apparatus required in these tests.

Bacteriology for Nurses—By Charles F. Carter, B. S., M. D., Director, Terrell-Carter Laboratory, Dallas, Texas. Illustrated. Published by The C. V. Mosby Company, St. Louis, Mo. Price, \$2.25.

This little book is composed of 39 chapters and 44 illustrations. The first and second chapters pertain to the value of bacteriology to nurses and history of the subject. Other chapters describe bacteria, and tells the routes by which it may enter the body and other valuable discussions.

Ultra-Violet Rays in the Treatment and Cure of Disease—By Percy Hall, M. R. C. S. (Eng.), L. R. C. P. (Lond.), Hon. Acting-Therapist, The Mount Vernon Hospital, London and Northwood. With introduction by Sir. Henry Gauvain, M. A., M. D., M. C. (Camb.), F. R. C. S. and Leonard E. Hill, M. B. (Lond.), F. R. S. Third Edition. Published by The C. V. Mosby Company, St. Louis, Mo. Price, \$4.50.

The admirable results from the proper use of ultra-violet rays has been so well established that a text on this subject should be well received. Chapter 13 describes the technique of administration and dosage. The book contains 64 illustrations.

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JOHN DEE JACKSON, M. D.
Medical Director**ERYSIPELAS**

In the case reported by A. Wilmot Jacobsen, Buffalo (Journal A. M. A., Aug 3, 1929), erysipelas streptococcus antitoxin in large doses (the full adult dose was administered on each occasion) failed to cause clinical improvement. The temperature remained elevated, the rash continued to spread and the general condition grew steadily worse. The fact that adult doses were given to an infant weighing 20 pounds (9Kg.) would seem to eliminate inadequate dosage as a factor in the failure of serum treatment. Nor can delay in administration or extreme debilitation of the patient be advanced as reasons for the failure. This is, in fact, one of those cases not infrequently seen and well recognized by men who have had experience with the use of antitoxin in erysipelas, in which antitoxin seems not to exert any effect whatever. On the other hand, blood transfusion on two occasions produced immediate and striking results. As there are probably many different strains of the streptococcus of erysipelas, one might expect the blood of one donor to be ineffective in a given case while that of another brought results. In a similar manner, failure of antitoxin therapy in a case due to an atypical strain of streptococcus could be explained.

No Starch

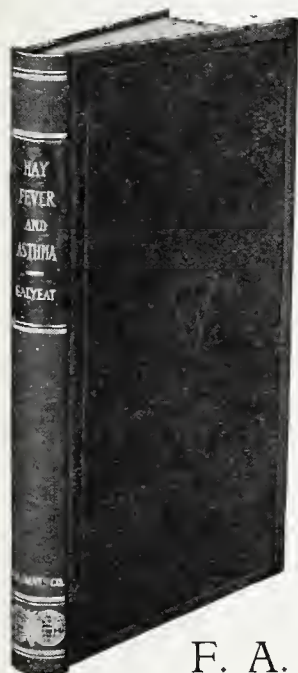
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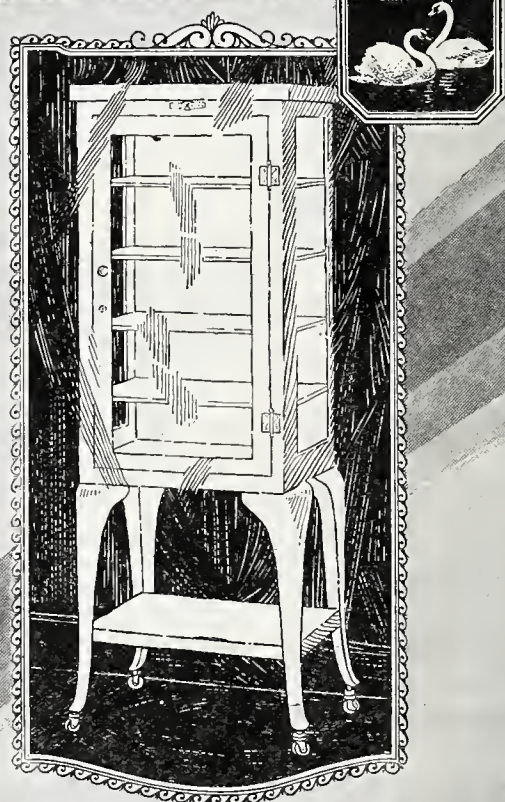
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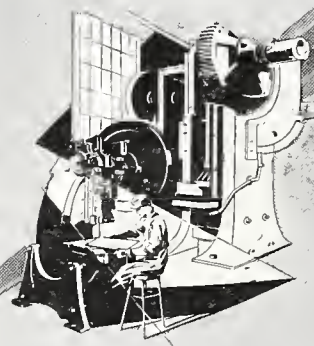
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No. 4

Original Articles

PERICARDITIS WITH EFFUSION*

W. G. HODGES, M. D., Malvern

Acute pericarditis with effusion occurs most frequently as a complication of the acute infectious diseases, especially acute articular rheumatism and pneumonia; but it may follow a focus of infection any where in the body, or contiguous infection as empyema, etc.

The fluid may be serous serofibrinous, purulent seropurulent or hemorrhagic, dependent usually on the etiological factors.

Chronic pericarditis with effusion is rare except as a later development. It is more frequently in advanced tuberculosis than any other infectious disease. Very large effusions are due occasionally to sarcoma, or carcinoma or may occur in the late stages of leukoma and Hodgkins disease. The pericardium is a serous sac which encloses the heart and the proximal portions of the great vessels. The quantity of fluid may exceed but slightly the amount normally present in the pericardium, or may be so great as to embarrass the cardiac movements and finally to arrest them altogether. In chronic cases the pericardium may become stretched so as to hold a quart or more without interfering with the heart action, while a small quantity is effused so rapidly that the pericardium has no time to accommodate itself by stretching and may prove fatal.

PHYSICAL SIGNS

The history is not always of great value. Pain over the pericardium and dyspnea are the most constant complaints, but that is not always present. When it is present it usually subsides as fluid accumulates. Neither occurs,

however sufficiently to be of much value. Before the amount of fluid reaches 150 or 200 cc. one important physical sign is a to and fro friction rub. This is sometimes heard throughout the disease.

After the amount reaches 200 cc. or more, other physical signs are: Extension of the cardiac, dulness upward to the left, substernal dulness, broadening of the heart shadow, physical signs of an area of compressed lung near the angle of the scapula on the left side and a pushing down of the left lobe of the liver. C. S. Williamson (A. M. A., 1921) in a study of physical signs states: "In pericarditis with effusion, the fluid accumulates earliest in the costodiaphragmatic angle. This is manifested clinically, he says, in all except in very small effusions by a pushing down of the left lobe of the liver. The extent to which the edge of the liver is depressed amounts to about two fingers' breadth with effusion of 500 or 600 cc. This sign, he says, "can nearly always be observed before any rounding of the cardiopathic angle or any increase in the great vessel dulness occurs." He claims that pericardial friction rub persists in about two-thirds of cases with fairly large effusions. This is especially true with disproportionately large heart, so that the latter organ comes into close opposition with sternum. Another author (Christian) believes that dulness near the angle of the scapula on the left side with broncho-vesicular or bronchial smothering and bronchophony are very early signs of effusion and may be present when there is only a small quantity of fluid.

DIAGNOSIS

The diagnosis of pericardial effusion may present much difficulty as the physical signs are not always conclusive. Therefore, many cases are not recognized. The chief difficulty is to distinguish the disease from hypertrophy and dilatation of the heart. I shall discuss

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

the diagnosis of pericarditis with effusion only from the elinitian's point of view. It is true that many cases go unrecognized despite utmost care and thoroughness in physical examinations. Especially, this may be true in infants, elderly people, or when the lung borders are adherent to the pericardium or to the chest wall. The diagnosis of pericardium with small effusion is of little interest. A large effusion is a serious matter. It embarrasses the heart action by preventing proper diastolic filling of the heart, particularly of the thin walled auricles. In such cases paracentesis may be a life saver. As stated above there may be the to and fro friction rub over the larger or smaller area of the anterior surface of the heart. We now know that this friction rub commonly persists even after a considerable amount of effusion has accumulated, for the reason that only in effusion of great size is the anterior surface of the heart entirely covered. The question is sometimes asked, where the fluid first accumulates. Williamson, of Chicago, has produced evidence that it first appears at the lower and anterior of the pericardial sac, namely, the costodiaphragmatic angle.

An early and valuable sign of pericardial fluid is increasing dullness on percussion under and lateral to the manubrium sternum. The upper portion of the pericardial sac enfolds the great vessels at the base of the heart. Several writers have shown that the venous pressure in the heart increases very regularly in proportion to the amount of the fluid found in the pericardial space, but that the arterial pressure decreases very slightly until a large amount of fluid has accumulated. After a certain point, however, it reduces very rapidly. An effusion does its harm by preventing full diastolic distention of the heart. Hoover has described a sign depending upon the balance of muscular action and its antagonists. Ordinarily the intercostal borders flare upon inspiration. In a large pericardial effusion, the angle is more acute because the mechanical efficiency of the diaphragm is increased by its leaflets pulling in a straight line instead of an arc.

REPORT OF CASE

Patient, male, age 58, still living. Beginning of illness, December 7, 1928. He was engaged in the manufacture of ice. Family history: Father died of cancer of lip at age of 56;

mother died at the age of 80. One brother died at the age of 56 with tuberculosis contracted from his wife. Two brothers living, ages 52 and 59, both in good health; one sister living, age 60, in good health.

Previous history: Had childhood diseases. About twenty years ago had trouble with fifth facial nerve causing squint of right eye. About thirteen months ago had an attack of renal colic and he was referred to urologist for examination. Cystoscopic examination disclosed no trouble with ureter or kidney.

Present History: No special malady, no pains, just worn out feeling with no energy and exceedingly nervous. It was only by persuasion that his wife was permitted to call a physician. I found the patient sitting up in a chair, fully dressed, did not think he was sick enough to go to bed. His temperature was 99 and increased to 100 by evening. Pulse 90, blood pressure, systolic 120, diastolic 90. Upon examination of chest I found lungs negative, very weak heart beat, heard best near the base. Percussion showed the left border of the heart in the anterior axillary line in the 6th interspace to the right. The cardiac dullness extended about 1-in. outside the right sternal margin; also a slight to and fro friction rub was heard occasionally. Tongue was coated, tonsils submerged, breath very offensive; teeth in fairly good condition, abdomen negative, complexion sallow. About the only complaint was that of nervousness and not being able to sleep. Temperature remained 99 in the mornings and 100 in evenings for about seven days and discomforts increased each day. Tincture of digitalis, 25 drops, four times daily, was prescribed on first visit; a saline laxative was given as needed. About the seventh day it became necessary to give oxygen for dyspnea. Head and shoulders were kept well elevated. On the eighth day of his illness, his condition became very critical, no heart sounds could be heard, and he was carried to a hospital for x-ray and fluoroscopic examination. This was made and the diagnosis of pericardial effusion was confirmed. The pericardium was aspirated at the 4th, intercostal space and about 700 cc of bloody fluid was removed. An x-ray picture made immediately with the needle in pericardium sac, showed no decrease in pericardium, but the patient was able to rest and sleep the first time in three days. He seemed to improve for about 7 days, then he became delirious again; was effected with dyspnea and

it was necessary to aspirate again with the results of about 1,300 cc. of bloody fluid. December 26, another x-ray was made which showed quite a decrease in pericardium. After aspiration the second time, the heart's beat could be heard best in the 4th interspace, 2-in. to the left of the midsternal line, but very faintly. Patient remained in the hospital 6 days longer and was brought home. After about four weeks, it was again necessary to give oxygen to sustain life. He was aspirated again, but no fluid was the result. If fluid was present, it was too thick to go through the needle. The patient was put on digitalis again, 25 drops four times daily and morphine, one-fourth grain hypodermically from four to six hours for relief of smothering, head and shoulders kept well elevated. With the heart's action very weak and heard in the 4th interspace, 2 inches to the left of midsternal line, pulse from 120 to 130, respiration from 8 to 10 when asleep, digitalis was discontinued after ten days because of lack of results. Morphine was increased to five-eighth grain every four to six hours. Refusing all liquids and foods by the mouth and for 15 days was delirious; he was given nourishment by proctoclysis. During this time it was necessary to give oxygen several times daily. After about fifteen days, slight improvement was noticed in heart's action. It was then decided to wash out the stomach and give one ounce magnesium sulphate after which he was given nasal feedings every four hours. After nasal feedings for five days, the mental condition began clearing up and the patient began taking nourishment by mouth. Morphine was gradually reduced. The patient is making slow recovery. Heart can be heard at base and apex. As yet we do not know the etiology of this case. The fluid aspirated was cultured and found to be negative. During his stay in the hospital, x-ray was made of lungs, gastro intestinal canal and complete urinalysis—all of which were negative. X-ray of the teeth was not made.

DISCUSSION

DR. S. F. HOGE, Little Rock: I would like to make a few remarks with reference to pericarditis with effusion. It is a very interesting subject and I think it was very well presented by Dr. Hodges. It is one of those conditions, however, that we do

not meet very frequently and when we do run against it we do not have much time to summarize and fix in our mind the proper procedure, if such can be stated. Very frequently we gain more by looking back on the case than we do looking forward on it.

I have seen two cases within the past year of pericarditis with effusion. They were extremely interesting. One of them is living and apparently quite all right, while the other one is dead. We got much data from the "post." In brief, the one that ended fatally was a colored girl about 33 years old that had a diagnosis of tuberculosis of the lung and possibly of the liver, with a massive shadow in the heart area, in which there was a question whether it was dilatation of the heart itself or was the pericardium dilated with fluid. The symptoms which Dr. Hodges enumerated were practically all present. The one that attracted our attention more than anything else was the outline of the heart and the distant heart sounds. As I remember it, this patient, ran a rather high temperature and showed a septic type or picture. We used digitalis in large quantities and over a period of time. She was in the hospital about seven or eight weeks, we did not hesitate at all to write an order for a dram of digitalis every four hours. Digitalis, even despite the condition of the heart, seemed to slow it down and have some results. An open operation was performed. We got over 750 cc. of fluid out of the pericardial space. This fluid was rather bloody in appearance and fairly thick. The heart was exposed. We could see it easily and it was rather a sight to see and hear the beating. That patient lived twelve or fifteen days after the operation. At the post-mortem it was rather hard to determine whether she died as the result of the operative procedure and the work that was done on the heart or whether it was the result of the tubercular process that was revealed. Her lungs were studded with tubercular processes that varied in size. Her spleen was also studded with tubercular lesions. The liver was filled with tubercular lesions. We didn't find any tuberculosis in the heart. We found the heart muscle markedly degenerated and with a thick coating of fibrin on the pericardial surface.

The other case was a negro, male, of about the same age. This man came in, however, in shock and it was rather assumed at once that the pressure of the fluid in the pericardial space was causing pressure in the larger vessels and the auricle and shutting off his blood supply. We aspirated that man's pericardium and drew off 500 cc. of fluid at the first aspiration. It was about the same in appearance as in the other case. We cultured it and got negative cultures. We injected that into a guinea pig and got negative findings for the tubercule bacilli. The x-ray finding, however, and the clinical picture shows conclusively that this individual does have a pulmonary tuberculosis rather widespread in the chest. This patient was aspirated five or six or seven times. His condition improved and he went home apparently clear of all of the symptoms that he had when he came in. That has been something like eight months ago and as yet he hasn't returned.

HEART IRREGULARITIES*

ARTHUR G. SULLIVAN, M. D.

Hot Springs National Park

I would like to call to your attention today to the more common manifestations of heart irregularities and their recognition by the ordinary methods of examination.

I propose to discuss briefly:

1. Sinus arrhythmia.
2. Premature Contractions (extra-systoles).
3. Heart Block.
4. Paroxysmal Tachycardia.
5. Auricular Flutter.
6. Auricular Fibrillation.
7. Alternation.

Let us first review for a moment the mechanism of the heart action. The impulse regulating the orderly beat of the heart arises from the sino-auricular node which is imbedded in the wall of the right auricle at the mouth of the superior vena cava. It spreads rapidly through the walls of both auricles and is transmitted to the ventricles through a narrow neuro-muscular tract, the auriculo-ventricular bundle. This band of tissue starts at the A-V node in the right auricle near the coronary sinus and proceeds downwards to the ventricular septum where it divides into two main branches, one on either side of the septum. These main branches subdivide and are connected to the ventricular musculature through a net work of cells named after Purkinje. Disturbances of heart rhythm are due either to interference with the sino-auricular node, the A-V node or bundle or to impulses arising from outside, e. g., the cardiac musculature or the vagus nerve. Irregular rhythm then is a mal-adjustment of the timing system and has nothing to do with valvular defects per se.

One of the most common of the irregularities is sinus Arrhythmia. It is normally observed in practically all children and young adults during the process of breathing and consists of a slight increase and decrease in the pulse rate. Most of us can observe it by feeling the pulse while taking forced inspirations and expirations. It disappears when the heart rate is increased, e. g., by exercise or fever. Another form is a marked slowing of the whole heart usually caused by some strong

emotion. This is probably the commonest cause of fainting in adults. Sinus Arrhythmia is of vagal origin and has very little pathological significance.

Premature contractions or extrasystoles are heart beats which disturb the normal cardiac rhythm by occurring too soon. They are due to impulses arising from the cardiac musculature.

This premature beat may or may not be strong enough to be transmitted to the pulse. If it is, it is felt as a quick faint beat and is followed by a compensatory pause. If it is not, the pulse intermits that beat altogether.

Examination of the heart, however, always discloses this premature beat and is the point which helps distinguish premature contractions from heart block in which latter case the apex reveals neither movement nor sound during the pulse pause. This condition is sometimes an accompaniment to valvular lesions when it deserves consideration as a possible early sign of myocardial involvement. It is not infrequently found in otherwise healthy subjects brought on by excessive use of tobacco, alcohol, or even by excitement.

Exercise causes it to disappear temporarily to return after resting. A change from the standing to lying position is sometimes sufficient to check it. In these cases it is of no particular significance although a note should be made of it and a check up of the patient's heart made from time to time.

Sedatives are indicated. Digitalis is contra-indicated in the absence of other conditions requiring its use.

HEART BLOCK

Heart Block is a condition in which there is an absence of ventricular responses to auricular impulses wholly or in part. If there is complete failure of the ventricle to respond, the condition is known as complete block. If the ventricles respond partially, the condition is known as partial heart block.

It is due to an impairment of the function of the tissues uniting auricle and ventricle, the A-V bundle. There are numerous grades of block varying from an occasional dropped beat to an entirely independent rhythm of auricles and ventricles.

They are not difficult to recognize. A pulse pause of twice the normal length during which examination of the apex reveals neither movement or sound and which is not preceded by a premature contraction is a "dropped beat"

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of heart block. These pauses may occur more frequently and with regularity so that every fourth beat is dropped, every third beat, or every other beat.

A sudden halving of the ventricular rate is usually block. Exercise promptly restores the normal rhythm, but it abruptly returns with rest. The block may be complete in which case the ventricle having completely lost the controlling influence of the auricle beats in response to a slow and regular series of impulses generated by its own musculature. We then have two dissociated rhythms, one starting in and controlling the auricles, the other originating in and controlling the ventricles.

The auricular rate is about the usual, 72 per minute, the ventricular rate about 30. Both are regular. Digitalis is usually contra-indicated in the severer forms of heart block, but its discriminating use may be of value in milder grades in which myocardial decompensation is the outstanding feature.

PAROXYSMAL TACHYCARDIA

Paroxysmal Tachycardia is an abrupt acceleration of the regular heart beat, abruptly terminating and repeated from time to time. It is due to some ectopic focus acting as pace-maker and fixing the rate higher than that of the sinus node. The attack may last from a few minutes to two weeks, usually a few hours. The rate may vary from 110 to 200. Usually from 140 to 190. It is best to count the rate at the apex as the pulse may be unreliable.

When we find a rate of 140 or over in an adult which is impervious to rest, exercise, change of posture or suspension of respiration we are probably dealing with a case of paroxysmal tachycardia. The symptoms may be almost negligible or may resemble acute dilatation in severity, depending upon the severity and length of the attack and the condition of the heart muscle. The prognosis for any individual attack is good, as death is rare. The ultimate prognosis depends upon the condition of the heart muscle, as determined during and between attacks. A healthy heart responds to an attack by decreasing in size, a diseased muscle by dilating.

AURICULAR FLUTTER

Auricular Flutter is a condition in which the normal beats of the auricle are superseded by a series of new and rhythmic impulses

arising from an unnatural focus at a rate of from 200 to 350 per minute. The distinction between this condition and paroxysmal tachycardia is sometimes extremely difficult. One of the notable features of flutter is that it is almost invariably accompanied by heart block.

The usual auricular rates are from 260 to 320 per minute.

A 2:1 heart block usually cuts the ventricular rate to 130 to 160. A 4:1 block may cut the ventricular rate to about normal, or complete dissociation may be present and the ventricle may beat at an entirely independent rate of 30 to 40. Occasionally ventricular response is irregular.

The slightest exercise or exertion is sufficient to induce regularity temporarily. While attacks of flutter may be of brief duration usually they last for months or years in contradistinction to paroxysmal tachycardia. Digitalis will break up the flutter and fibrillation ensues. Then upon withdrawal of the drug normal rhythm is restored. If a relapse occurs it is a fibrillation, not a flutter, and can be easily controlled. Flutter, once established, seems to perpetuate itself, but once the rhythm is broken it is not likely to occur.

AURICULAR FIBRILLATION

Auricular Fibrillation, expressly referred to sometimes as delirium cordis, is a condition in which the auricles fail to contract, but remain in a state of constant activity or fibrillary twitchings; the normal ventricular impulses are absent and are replaced by haphazard impulses from the auricle producing the most disordered action of any of the heart irregularities.

The ventricular rate is usually between 90 and 160, but may go as high as 200. Not all these responses are strong enough to reach the pulse and a count at the apex and at the pulse will reveal a discrepancy of ten or more beats per minute to which the term "pulse deficit" is applied. The pulse is a conglomeration of weak and strong beats, fast then slow, fading away for a moment then returning with a rush. The main points in the diagnosis are the rate, the complete irregularity of the rhythm which is augmented by exercise, decreasing subsequently; its persistence, pulse defect and finally the signs of heart failure. The condition, of course, is the one par excellence for the exhibition of digitalis. There are few conditions which are more quickly

benefited, in which as much distress is alleviated, and in which the grave is so apparently cheated of its lawful prey as in auricular fibrillation.

ALTERNATION OF THE HEART

The last irregularity to which I desire to call your attention is Alternation of the Heart. This is a condition in which the left ventricle while beating regularly expels larger and smaller quantities of blood at alternate contractions. It is thought to be due to a variable number of ventricular fibers contracting during the systoles. It is not an uncommon condition, but frequently overlooked. It can hardly be detected by the finger on the pulse. Careful manipulation of the sphygmomanometer may cut the pulse rate in half as the systolic pressure of the strong beats is several mm. higher than the weak beats. It is usually observed as an accompaniment to other severe signs, angina pectoris, nocturnal dyspnoea, Cheyne-Stokes respiration or high blood pressure, although it may occasionally precede them.

It is of importance chiefly because of its prognostic significance. It betokens a dying heart muscle. Death may intervene suddenly or in the course of a few weeks. Seldom will a case of alternation last the year out.

DISCUSSION

PRESIDENT MANN: I want to call your attention to one fact, if you will permit me. I know nothing about heart lesions. Yesterday afternoon we had a program filled by distinguished men from outside of our State, noted men in distant cities. This morning we have been enjoying a program from Arkansas men, and I leave it to you as members of this audience, without any disrespect to our distinguished guests, that the papers contributed by these young Arkansas men have been quite if not better prepared and as scientifically delivered as the papers delivered by our distinguished guests. (Applause). Does any one want to discuss this paper?

DR. R. H. WILLETT, Jonesboro: I think every one here has enjoyed the doctor's paper on cardiac irregularities. There was one thing I had hoped the doctor would mention: calling the attention of the medical profession to what coffee is doing today in cardiac irregularities. Possibly due to the fact that since the 18th Amendment has come into effect the laymen are using more coffee. I know in our part of the country, our little city of Jonesboro, we have one place, particularly, that the laymen make a hobby of visiting possibly one, two or three times a day to drink coffee. There has come to me in the last week two cases that I can recall very readily from the standpoint of pain in the cardiac region, and both of these cases, to my mind are due to the effect of coffee. If we will look into the matter, we will

find it is probably due to the reflex activity from gastric irritation going through the pneumogastric.

Another point I wish the doctor would bring out in closing is what experience if any he has had in the use of quinidin in these arrhythmias. He spoke of digitalis. In my own experience I have not had the good results with digitalis that I have had with quinidin.

Dr. F. J. SCULLY, Hot Springs: I enjoyed Dr. Sullivan's paper very much. He has brought out the diagnosis of the irregularities very plainly. I wish to emphasize a few points in the prognosis of these conditions. Paroxysmal tachycardia is one of the most alarming conditions. The pulse becomes very fast and the patient is very uncomfortable, but we know that the condition will subside as quickly as it has come on and the rate return to normal. Extra or premature systole can go on for years without apparent change in the patient's health. If we understand the nature and the outcome of these conditions, we can better reassure the patient and the family. The more serious irregularities, such as fibrillation and flutter, indicate a failing heart muscle or a heart laboring under strain and indicate the necessity for rest and treatment.

DR. SULLIVAN, in Response: Replying to the doctor, my experience with quinidin has been very limited. I had hoped to go more into that as I think in selected cases we can get results that you can't with digitalis.

My purpose in presenting this paper today was to try to get all interested a little more in our cardiac patients. When I scanned the figures of the American Heart Association and learned that two per cent of the entire population is afflicted with cardiac disease, that fifteen per cent of all deaths are due to cardiac disease, that with patients over 55 approximately sixty per cent of the deaths are due to cardiovascular and renal diseases, I think it behooves us to pay a little more attention to the possibility of cardiac complications in our patients. I think cardiology offers a fertile field for the study of ways and means for increasing the life span. I thank you.

ANGINA PECTORIS*

L. F. BARRIER, M. D.

Little Rock

In the light of present day knowledge of cardiac conditions the term angina pectoris is as acceptable for its specificity as is the term fever. To many, disease entities are embraced by it for its longer use without the addition of qualifying adjectives, for the complicated phenomenon we call angina pectoris is but the expression in pain of exhaustion of the heart (23-37) muscle without any relation to the causative pathology. The amount of angor present determines the degree of cardiac exhaustion, not the amount of pathology. The pain of angina pectoris probably rises in the

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sensory nerve fibers of the coats of the arteries supplying the functioning muscle fibers suddenly deprived of nutrition and not in the pathological areas producing deprivation. The pathological areas, however, determine the direction (3) of radiation of pain and the direction of transmission of the electrical (6-20, 33-34) impulses which produce cardiac contraction. This conception of the cause of pain in angina brings in a clearer understanding of why one case of coronary sclerosis is accompanied by angina while another is not (25). In the non-anginal (13) case, sclerosis has been gradually oncoming, allowing for compensatory increase in the size of the other coronary and its anastomosing branches, thus assuring a sufficient blood supply to the functioning muscle; while in the anginal case the sclerosis is of such rapid progress that there is not sufficient compensatory dilatation of the other coronary and its branches to bring the functioning muscle sufficient nutrition and pain results.

With this brief resume of the generally accepted opinion concerning angina pectoris, I wish to suggest a nomenclature based on the causative pathological areas and show that differences in direction of pain radiation and in cardiographic tracings will enable us to differentiate the different disease entities from each other and institute proper therapeutic and living regimes which will bring about relief from distress and conservation and increase in cardiac reserve.

The following nomenclature is based on pathological findings and terms may be added or deleted as our knowledge of the anginas increases.

1. Angina of aortitis (3).
2. Angina of coronary sclerosis (3).
3. Angina of coronary occlusions (3).
4. Angina of myocardial fibrosis (3).
5. Mixed angina. (Combination type).
6. Toxic angina.
 - (a) Spasmodic.
 - (b) Myocardial.
 - (c) Thyrotoxic.
7. Angina Paradoxus.

Without knowing site of causative pathology or the cardiac areas responding to stimulant with spasm we cannot intelligently treat anginas. I have found the electro-cardiograph an agency of the greatest value in differentiating between the different anginas and negative

findings are of as great value as are positive. I believe a negative cardiogram during an anginal attack is pathognomonic of a lesion of the right heart and a positive cardiogram taken during an attack followed by a negative cardiogram when attack has ceased is pathognomonic of spasmodic angina. A tremendous mass of evidence has been accumulated substantiating this view and the evidence already in hand is being constantly added to by new observers and students of the anginal states. Drugs useful in one may be contraindicated in another. Digitalis, useful above all drugs in myocardial angina, is useless and at times even dangerous in coronary and aortic (24.)

I. The term aortic angina or the angina of aortitis, first suggested by Harlow Brooks, is proposed for that type of angina in which the site of pathology is found in the aorta and not in the heart itself (3-23). In this type we find the sclerotic process involving the orifices of the coronary arteries in certain cases, in other cases the coronary orifices are free from pathology. Narrowing of the coronary orifices will account for nutrient deficiency of the cardiac muscle with resultant pain on exertion. In those cases, however, which show no involvement of the coronary orifices the angina produced by aortitis is explained by the fact that the rigidity of the aortic wall is so great and extends so far up the lumen that the diastolic rebound during which the coronaries receive their blood supply must begin at a point so high in the aorta that a second systole has already commenced before the returning impulse reaches the coronary openings, thus the heart is deprived of all nutrition except that furnished by filling the blood vessels through suction developed by relaxation of the ventricles. Nutrition secured in this manner is barely sufficient for the heart's minimum needs and any extra labor brings on a crisis of pain.

The pain of aortic angina radiates upward into the neck or to the mesosternum (3-26). Aortic angina cases usually give a history of frequent attacks of dyspnoea and substernal pain preceding onset of angina (3-12).

Electrocardiograms of this condition present (39) tracings noted in aortic diseases as:

1. Left ventricular (17-18) preponderance with small or flattened T in Lead I. Should coronary sclerosis accompany aortitis, T I may be negative.

2. Right ventricular preponderance (16) when mitral stenosis accompanies aortitis.

3. Large R deflection (16-22) in Lead II with negative T in Lead II or Leads II and III. The negative T waves of this condition do not show characteristics similar to those found in coronary artery disease.

4. Right bundle (16) branch block.

5. Prolonged ST interval.

II. The term coronary angina, the angina of coronary sclerosis, also suggested by Brooks is proposed for that type of angina in which the pain radiates into one or (1 and 3) both arms and the pathological findings are those of coronary sclerosis, and giving typical cardiographic curves when the left coronary is involved and either negative or right bundle branch (30-27) block curves when there is involvement of the right.

The characteristic curve of left coronary (27) disease consists in an upward convexity rising from foot of the QRS complex followed by a sharp downward peak of T in Lead I or in Leads I and II. This peculiar curve when found in Lead III is of no significance unless accompanied by a negative T in Lead II.

The curve of Right Bundle Branch block frequently met with in right coronary sclerosis will be described under the heading of angina of myocardial fibrosis.

III. The term angina of coronary occlusion is proposed for the much feared syndrome of epigastric pain (19-14-24-10) and shock followed by fever and leukocytosis, due to a complete blocking of the lumen of one or both of the coronary arteries or of their branches. When occlusion is the final stage of sclerosis, pain may and usually does radiate into the arms as well as into the epigastrium, but is never so severe as the epigastric pain. I have classed this condition among the anginas for it is as typically a reaction of cardiac muscle exhaustion as is the angina of coronary sclerosis and symptomatically being such has no greater right of being considered a distinct disease condition than has coronary sclerosis.

That we are dealing with a condition of cardiac exhaustion in occlusion is proven by the facts that the degree of pain and prostration depend on amount of myocardium deprived of nutrition, that coronary occlusion occurs without pain when of slow development and collateral circulation (31-40) is perfected, and that coronary occlusion at times gives

relief (3) to angina by causing absolute death to involved muscle cells with replacement by fibrosis (Autopsy reports) (41).

Typical cardiographic curves are always present (39) in sudden occlusion of the left coronary consisting (11-27-28-31) of T waves of large excursion and amplitude rising either high up on the descending limb of R when positive and low down on the ascending limb of S when negative and is frequently associated with low voltage and auricular fibrillation (15-14). This type of curve is present during and immediately following an attack. Gradual changes take place following the attack (7-9-24-30-31) until typical post occlusion cardiograms are obtained which consists in sharp inversion of T in one or more Leads. QRS complexes 5-21 are of low voltage in at least two Leads (35) usually in all. Negative T wave of large amplitudes occurring in all three Leads is considered by many as being pathognomic of occlusion of the descending branch of the left coronary. In occlusion due to the gradual narrowing of sclerosis, the curves will be found to conform to those obtained in post occlusion studies. A marked decrease in the amplitude of QRS complex with negative T I and T II following an intense anginal attack suggests occlusion of the circumflex artery (11-31). Cardiographic curves of right coronary occlusion are usually normal though a right bundle branch block curve is at times (9-11-21) noticed.

80 per cent (36) of all cases of occlusion occur in the left coronary or its branches. Of the remaining 20 per cent, i. e., those involving the right coronary, eight cases out of ten are of syphilitic origin.

The radiation of the pain of coronary occlusion to the epigastrium brings as great diagnostic difficulties to the physicians as any he meets in practice. The severe epigastric pain nausea and shock present in this condition forms a syndrome which until recently was thought pathognomonic of rupture of some of the upper abdominal viscera (29). The cardiograph is invaluable in differentiation for it shows positive curves in all lesions of the left coronary, and at times of the right. The history of syphilis or of arteriosclerosis, vomiting absent in spite of nausea, during the attack, but immediately following cessation of pain narrows the chances of error in diagnosis to a minimum.

IV. Myocardial angina, or angina of myocardial fibrosis (3) terms suggested by Brooks is proposed for angina in which the pain is located in the precordium, with little or no radiation and usually accompanied by dyspnoea and pulmonary edema. The sense of constriction is confined to the region of the heart and not to the entire chest as is present in the coronary and aortic types. The curves of this condition are those of Bundle Branch or arborization block.

In Bundle Branch Block (16) the QRS deflections of the cardiogram are of large amplitude with a T wave of large amplitude. The apex of which is directed in the opposite direction to the long spike of the QRS complex and with prolongation of the QS interval beyond .14 seconds. Direction of QRS complexes is similar to those found in LVP and RVP.

The curves of arborization block show (35-4) QRS complexes of low voltage with notching of apices and slurring of limbs in all Leads, a ragged iso-electric line and prolonged QS interval. Auricular fibrillation and extra systoles are frequently associated with arborization block. History of attacks of dyspnoea, palpitation and discomfort in heart preceeding the appearance of angina by several months can usually be obtained.

V. The term, mixed angina, is proposed for those cases in which symptomatology and cardiographic curves suggests involvement of two or more pathological areas in the production of an attack. An involvement of one or both of the coronary and the aorta is suggested by pain radiating into both neck and arms. Autopsy reports have noted such findings repeatedly. Pain radiating into the neck alone, but with a cardiogram denoting left coronary sclerosis is occasionally noted. In these cases the pain is caused by aortitis though there is a sclerosis of the left coronary present. Autopsy reports have repeatedly shown aortitis and coronary sclerosis occurring together and when we obtain such cardiographic curves we may be sure that there is marked enlargement of the lumen of the left coronary and its branches.

We have frequently noted cases suggesting by symptoms and cardiographic curves, myocardial and coronary pathology and myocardial and aortic lesions occurring together Autopsy (41) reports show that such occurrences are not rare.

VI. The term toxic angina has been mentioned in the literature for over a century in describing anginal attacks produced by the effect of toxic (3-8-23) substances on the nutrition of the heart. These effects are produced by spasms of the arteries controlling blood supply in certain cases and by the effect of toxic materials on the myocardium or its nerve supply in others.

A. We propose the term spasmodic angina for that type of toxic angina in which pain radiates into one or both arms, into the neck or into neck and arms produced by spasmodic constriction of one or both coronaries or of the aortic spasm being due to action of poisons on local vaso-constrictors.

This conception of the causes of the spasmodic anginas is in all probability correct as similar cardiographic curves unaccompanied by pain have been produced in healthy animal hearts by the injection of adrenalin into the coronary artery and into the muscle itself with reappearance of normal curves when the effect of adrenalin had worn off. Why no pain accompanies these experiments is due to the fact that the effect of the adrenalin injected wore off ere the limit of the heart muscle reserve was reached.

During the attack typical curves of disease (2-7) conditions of these arteries are found and in the interim normal cardiograms are usually obtained although mild attacks with negative cardiograms have been reported, causative factors being such articles as tea, coffee, tobacco, toxic products of constipation, hyperadrenia and acute infections, etc. Attacks of spasmodic angina are frequently seen in cases of arterio sclerosis (37). Under this head we place those cases of angina produced by spasms affecting only the terminal branches of the coronary arteries, the pain remaining precordial in character and usually showing curves during attacks of arborization block rather than of coronary disease and following the attack shows normal curves.

The spasmodic anginas are of frequent occurrence and unless they are grafted on already diseased hearts show little dyspnoea and no pulmonary moisture and are usually met in cases with history of spasmogenic tendencies.

B. The term toxic myocardial angina is proposed for anginal attacks in which the pain remains precordial, is accompanied by marked

dyspnoea and pulmonary edema and give, during the paroxysm which is usually of long duration and of frequent recurrence, cardiographic curves of delayed or obstructed electrical conduction as (7) bundle branch or arborization block, to be followed at end of attack by normal cardiograms. This type of angina is thought to be caused by the paralysis for a time of the nutrient nerves of the heart so that during the term of paralysis the muscle fibres of the affected area are unable to accept nutrition and, working without food, react with pain.

It might be thought that some difficulty would be experienced in differentiating the toxic anginas from the anginas of right coronary sclerosis as negative cardiograms are usually found following both conditions. History of recent excesses, spasmogenic tendencies, emotional distress, or of acute infections suggest toxic angina so strongly that cardiographic evidence beyond mere negativity is not needed.

C. Thyrotoxic angina is sometimes met in cases of hyperthyroidism. In these cases the pain is referred either into the arms or neck or both. The attacks are usually of frequent occurrence and while pain is intense, dyspnoea and distress are not marked. To determine whether the angina is due to hyperthyroidism alone or is of some other type antidating or superimposed on a thyrotoxicosis the cardiogram is essential. The curves of hyperthyroidism, though varied, are typical.

VII. The term angina paradoxus is suggested for anginal attacks which are relieved by exertion. All cases so far reported have been found in persons who have been engaged for many years in occupations requiring long hours of hard labor each day; and that attacks have never been known to occur during hours of labor.

I believe the causative factor in its production to be a lack of some of the end products of muscle metabolism which the heart has by virtue of long association requires for proper function of the muscle and its absence, caused by several hours of rest, is resented by the heart, the heart's resentment showing itself in attacks of pain.

Another conception as to cause of this condition must be given consideration, this being that the heart has been trained to receive its nutrition when the blood pressure is somewhat raised by exertion. After labor ceases the

rapidity of the heart rate slows and the blood pressure gradually lowers, decreasing the food supply. As the heart at cessation of labor is well supplied with nutrition, several hours may be required before the excess food supply stored in the muscle cell becomes sufficiently lowered and fatigue results. Resumption of labor by increasing food supply brings relief.

Having seen but one case of this type and that before I could avail myself of cardiographic aid and being unable to find any reports of cardiographic studies of the condition, I am unable to discuss the value of cardiogram in these cases. From a diagnostic standpoint, no aid is needed to differentiate this type from others. The cessation of pain on exertion is pathognomonic.

I have refrained from discussing the classical symptoms of these conditions, the pain, the anguish, and sense of impending death, for we are all familiar with these. I do wish to mention several of the prodromal symptoms, however, for by early recognition of their significance we may be able to save numberless patients from becoming victims of this syndrome.

Patients showing moderate dyspnoea or slight precordial distress after exertion, of attacks of weakness and faintness on rising suddenly, of palpitation and extra systoles coming on at night or after eating (5), with or without indigestion, and pain of a neuralgic nature occurring about elbows, soreness of the outer edge of the pectoralis, major, and pain beneath the sternum should be carefully studied and cardiograms frequently made for record of changes in the conduction apparatus of the heart, all detrimental habits corrected and a living regime instituted for conservation of the cardiac muscle.

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DISCUSSION

DR. ARTHUR G. SULLIVAN, Hot Springs: This paper of Dr. Barrier's is very exhaustive. I know of no more distressing or baffling disease or more malignant disease than angina pectoris. There is just one point I would like to emphasize of the symptoms and that is the fact that the patients so frequently break out in a cold perspiration usually following this attack of pain. I don't think there is any condition in which the history is of more importance and the physical examination of less importance than anginas.

In this high pressure age things are said and done in a hurry, often automatically or without due consideration of the effect or consequences—careless words—and dangerous!

Insurance companies are cold-blooded business concerns, rarely given to sentiment. One of the largest of the medical indemnity insurers has been so strongly impressed by the increase in malpractice claims that it has sent out a notice that says among other things:

"Refrain from making remarks about any other doctor's work. Without doubt this is a common source of instigating malpractice litigation and most such remarks are thoughtlessly made."

Things have reached a pretty state of affairs and competition its lowest plane when all over this nation it seems necessary to remind physicians that we are slipping in our professional morals, our decency, and our ethics. What a commentary, that a group of laymen have to beg us to refrain from the dirty dig, from careless words—and dangerous!—Del. Med. Jour.

THE JOURNAL

OF THE

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

ABSTRACT OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES AT THE PORTLAND SESSION OF THE AMERICAN MEDICAL ASSOCIATION

July 8-12, 1929

The Eightieth Annual Session of the American Medical Association was held in Portland, Oregon, July 8 to 12, 1929.

The House of Delegates convened at 10:00 a. m., July 8, and was called to order by the Speaker, Dr. F. C. Warnshuis of Michigan.

The minutes of the Seventy-Ninth Annual Session were approved as printed. The annual addresses of the Speaker, the President and the President-Elect were heard by the House and referred to the Reference Committee on Reports of Officers. These addresses appeared in The Journal of the American Medical Association for July 20, 1929. Reports of the Board of Trustees, of the Secretary, of councils and of other standing committees were submitted to the House and referred to reference committees.

That part of the report of the Board of Trustees dealing with the need for a new building to house the activities of the Association was referred to a special committee appointed by the Speaker on authorization of the House.

HISTORY OF THE AMERICAN MEDICAL ASSOCIATION

Dr. William Allen Pusey, delegate from Illinois, submitted a resolution providing for the appointment of a committee by the Board of Trustees to direct the preparation and publication of a comprehensive history of the Association. This resolution, having been referred to the Board of Trustees, was recommended for adoption and the recommendation was approved by the House of Delegates.

PRACTICE BY CORPORATIONS AND OTHER GROUPS AND THE RELATIONSHIP OF PHYSICIANS THERETO

Dr. William Allen Pusey, delegate from Illinois, presented a resolution providing that the Judicial Council of the Association be asked to present to the House of Delegates at the annual meeting in 1930 comprehensive

statement for the guidance of the American Medical Association concerning the practice of medicine by corporations, by clinics, by philanthropic organizations, by industrial organizations, by demonstrations and by similar organizations, and concerning the relationship of physicians thereto.

This resolution was considered by the House of Delegates in executive session. The resolution was adopted.

HOME FOR INDIGENT PHYSICIANS

Dr. J. Norman Henry of Pennsylvania submitted the report of a special committee appointed to study the need for the establishment of a home for needy physicians. This report was referred to the Board of Trustees and was recommended for adoption. After discussion by several delegates, the recommendations of the Board of Trustees were approved, and the report of the committee adopted. The report of the committee advised against the establishment by the Association of a home or homes for indigent physicians and expressed the opinion that "it is not, nor should it be, a function of the American Medical Association *at this time* to undertake the care of indigent physicians in any way."

LISTS OF PHYSICIANS IN CLASSIFIED TELEPHONE DIRECTORIES

Dr. G. Henry Mundt, delegate from Illinois, submitted a resolution providing that when publishers of classified telephone directories impose a charge for listing the names of ethical physicians in such directories, component county medical societies of the American Medical Association be advised to discontinue such listings in classified directories. The Reference Committee on Legislation and Public Relations, to which this resolution was referred, recommended the adoption of the resolution, and the recommendation of the Reference Committee was approved by the House of Delegates.

ENDORSEMENT OF THE METHODS OF THE DEPARTMENT OF COMMERCE IN THE SELECTION OF MEDICAL EXAMINERS

Dr. Albert Soiland, delegate from California, submitted a resolution providing that the American Medical Association should endorse "the medical work of the Department of Commerce, its methods of physical exam-

ination and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine." This resolution, referred to the Reference Committee on Hygiene and Public Health, was favorably reported and was adopted by the House of Delegates.

DANGERS OF ILLUMINATING GASES AND GASES USED IN ELECTRICAL REFRIGERATION

Dr. J. W. Van Derslice, delegate from Illinois, submitted a resolution providing for the appointment by the Board of Trustees of a committee to study and report on the menaces to health and to life from carbon monoxide gas as a constituent of illuminating gas and as a by-product of the combustion of gasoline in automobiles; on the dangers of gases used in electrical refrigeration, and on steps necessary to be taken for the protection of the public. This resolution, referred to the Reference Committee on Hygiene and Public Health was adopted by the House.

TEACHING OF OBSTETRICS

Dr. James R. Bloss, delegate from West Virginia, presented a resolution providing that the Council on Medical Education and Hospitals be asked to investigate the present teaching of obstetrics in the United States and to seek readjustment of the curriculum so that hours allotted to teaching of obstetrics be equal to those allotted to the teaching of surgery. The Reference Committee on Medical Education recommended the amendment of the resolution as presented by Dr. Bloss so that it would provide that the House of Delegates request the Council on Medical Education and Hospitals to investigate the present teaching of obstetrics "and make such recommendations for increasing the clinical teaching hours of obstetrics as the results of its investigations may warrant." On motion of Dr. Mundt of Illinois, seconded by Dr. Mongan of Massachusetts, the resolution was re-referred to the Reference Committee on Medical Education. At a later session this Reference Committee recommended the adoption of the following resolution:

Whereas, The time allotted for the teaching of obstetrics in the curriculums of the several medical schools has been cut down and is inadequate to drill the student thoroughly in this important major, be it

RESOLVED, That the House of Delegates request the Council on Medical Education to investigate the present teaching of obstetrics in this country and make such recommendations for increasing the clinical teaching hours of obstetrics as the results of its investigations may warrant.

The resolution as amended by the Reference Committee was adopted by the House of Delegates.

AMENDMENTS TO BY-LAWS

Dr. E. C. Thrash, delegate from Georgia, proposed the following amendment to the By-Laws: Amend Chapter XIX of the By-Laws by substituting the words "two-thirds" for the words "three-fourths" so as to permit the amendment of the By-Laws of the Association by a two-thirds vote of the House of Delegates. On recommendation of the Reference Committee on Amendments to the Constitution and By-Laws, the proposed amendment was adopted.

ADVERTISING HOSPITALS

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology, presented a resolution providing that inasmuch as some hospitals, municipal and otherwise, have advertised in the daily press "and have given to the public stories of their special excellence and efficiency as compared with other hospitals," such advertisements be collected by the Council on Medical Education and Hospitals and that the "question of hospital advertising be given due consideration and reported to the House of Delegates at the next annual meeting and the rating of hospitals be affected according to the unethical advertising published."

The Reference Committee on Medical Education, to which this resolution was referred, recommended the amendment of the resolution as introduced by Dr. Shurly so that it would read as follows:

RESOLVED, That any physician observing such advertisements be requested to send them to the Council on Medical Education and Hospitals for its information and use in the rating of hospitals.

The resolution as amended was adopted.

HONORARIUMS TO SECTION SECRETARIES

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology,

submitted a resolution providing that the sum of \$100.00 shall be paid to each section secretary in addition to the honorarium now paid "to cover the actual expenses involved in the preparation of the program and the presentation of the same at the annual meeting." The Board of Trustees, to which this resolution was referred, reported that no statement had come to the attention of the Board indicating that the honorarium now paid section secretaries is insufficient, and that the Board of Trustees stands ready to make necessary and proper adjustments. The report of the Board of Trustees was approved by the House of Delegates.

SUPPLEMENT TO THE JOURNAL

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology, submitted a resolution providing that the Board of Trustees be authorized to prepare a supplement to the The Journal, in which papers read before sections and not accepted for regular publication in The Journal should appear. This resolution was reported unfavorably by the the Board of Trustees, to whom it had been referred, and the House of Delegates adopted the recommendation of the Board.

DIGEST ON PHYSICAL THERAPY

Dr. Joseph F. Smith, delegate from Wisconsin, presented a resolution providing that the Board of Trustees be requested to have prepared by the Council on Physical Therapy a digest setting forth the basic principles underlying the employment of physical agents and their mode of action on living tissue, and to publish this digest in a form which would be available to physicians. The Board of Trustees reported to the effect that a handbook of the kind provided for in the resolution is already in the course of preparation.

EXPENSES OF DELEGATES

Dr. Frank Smithies, delegate from the Section on Gastro-Enterology and Proctology, submitted a resolution providing that the Board of Trustees be directed to defray expenditures of delegates for transportation, housing and maintenance during attendance on each annual session. This resolution was referred to the Board of Trustees, which recommended that the resolution be not adopted. This recommendation was approved by the House of Delegates.

NEEDS OF SMALL HOSPITALS

Dr. T. O. Freeman, delegate from Illinois, submitted resolutions providing that the Council on Medical Education and Hospitals be ready to make a survey of the needs of smaller hospitals, to render all possible assistance to such institutions desirous of improving their system of records and their services to the public, and to offer its assistance to State registration departments to the end that such departments may secure such aid as they desire in connection with their classification of accredited hospitals. The Reference Committee on Medical Education, to which this resolution was referred, reported to the House of Delegates that in its opinion the investigation begun several years ago and now being carried on by the Council on Medical Education and Hospitals would fulfill all the objects of the resolution, and that the Reference Committee believed that the Council stands ready to give all possible assistance to small hospitals in solving their problems. The Reference Committee recommended that the resolution be not adopted, and this recommendation was approved by the House of Delegates.

DIRECTION OF RED CROSS NURSES BY CULTISTS

Dr. J. C. Litzenberg, delegate from Minnesota, submitted a resolution adopted by the Minnesota State Medical Association, disapproving the policy of the American Red Cross in officially authorizing Red Cross nurses to nurse patients under the care of cultists. The Reference Committee on Legislation and Public Relations recommended that the American Medical Association disapprove any change in policy by the American Red Cross whereby the nurses of that organization would be available for service to patients under the care of cultists, and that the Secretary of the Association communicate with the proper officials of the American Red Cross and advise that organization of the attitude of the House of Delegates. The recommendations of the Reference Committee were adopted.

NEW BUILDING

The special committee, to which that part of the report of the Board of Trustees dealing with the need for a new building for housing the activities of the Association was referred, expressed its conviction that it is desirable for the Association to have a building "that would be visible evidence of the dignity, importance

and power of the Association," and recommended that it should be left to the Board of Trustees to perfect plans for providing the building.

This committee also expressed the opinion that the subscription price of The Journal is now relatively greatly below the price of other journals that approximate it in extent and quality, and suggested that the Board of Trustees should consider the question of increasing the subscription of The Journal.

A third recommendation of the committee was to the effect that it would be appropriate for the Board of Trustees, in a building program, to solicit memorial contributions, both large and small, from members of the Association. The committee expressed its conviction that as the Association shows increased evidence of strength and permanence it will gradually become the recipient of an increased number of memorial contributions.

The report of the special committee was adopted by the House of Delegates.

Later in the proceedings, Dr. William Allen Pusey, delegate from Illinois, introduced a proposed amendment to the By-Laws providing that the subscription price of The Journal shall not exceed \$8.00.

This proposed amendment was adopted by the House, and the Board of Trustees is thereby authorized to increase the subscription price of The Journal to a sum not in excess of \$8.00 a year.

PERIODS OF PRACTICAL EXPERIENCE FOR MEDICAL STUDENTS

Dr. E. J. Goodwin, delegate from Missouri, presented a resolution that had been adopted by the Missouri State Medical Association providing that medical schools be encouraged to arrange for periods of practical experience for students with practitioners of high standing, preferably in rural communities, and that the Council on Medical Education and Hospitals be instructed to consider the plan proposed by the Missouri State Medical Association and, if the plan is found to be feasible and beneficial, the Council be urged to encourage medical schools to "inaugurate suitable methods for providing these vacation periods of practical experience for their students." The Reference Committee on Medical Education reported favorably on this resolution, and it was adopted by the House of Delegates.

SAFETY OF MILK FOR HUMAN CONSUMPTION

Dr. A. T. McCormack, delegate from Kentucky, submitted a resolution providing that "it is the sense of the American Medical Association that the determination of measures necessary for insuring the safety of milk for human consumption is a duty and function of the medical profession through the duly constituted public health officials of this country." The Reference Committee on Hygiene and Public Health recommended the adoption of the resolution and this recommendation was approved by the House of Delegates.

COMMITTEE ON MILITARY AFFAIRS AND
NATIONAL DEFENSE

Dr. H. C. Mallory, delegate from the U. S. Army, presented a resolution providing for the appointment by the Board of Trustees of a special permanent committee to be known as the Committee on Military Affairs and National Defense, to which shall be referred matters pertaining to national defense and military preparedness. The adoption of this resolution was recommended by the Board of Trustees and this recommendation was approved by the House of Delegates.

NATIONAL DEFENSE ACT OF 1920

Dr. Holman Taylor, delegate from Texas, introduced a resolution providing that the American Medical Association, through its House of Delegates, go on record as heartily approving the National Defense Act of 1920. The Reference Committee on Legislation and Public Relations reported the resolution favorably, and it was adopted.

INCREASED TARIFF ON SURGICAL INSTRUMENTS

Dr. Albert Soiland, delegate from California, submitted a resolution providing that the House of Delegates record its opposition to the passage of a bill providing for increased tariff on surgical instruments, x-ray equipment, vacuum tubes, valve tubes and scientific glassware. The Board of Trustees recommended the adoption of the resolution, and the House of Delegates approved this recommendation.

STANDARDS OF PHYSICAL FITNESS OF
AUTOMOTIVE OPERATORS

Dr. H. C. Macatee, delegate from the District of Columbia, presented a resolution setting out that relatively few accidents occur because of defects of sight and hearing and

providing that the House of Delegates "consider the advisability of amending the present standards of physical fitness of automotive operators, adopted by this Association, by the adoption of standards of mental and moral fitness to be recommended for adoption by the several States as a condition for issuing licenses to operate motor vehicles, and that this resolution be referred to a special committee for consideration and report at the next annual session." The Reference Committee on Hygiene and public Health recommended the adoption of the resolution. On motion of Dr. G. Henry Mundt, delegate from Illinois, the resolution was amended by deleting a statement in the preamble to the effect that relatively few accidents occur because of defects of sight and hearing. The resolution as amended was adopted.

MEDICAL EXPERT OPINION

Dr. Tom B. Throckmorton, delegate from the Section on Nervous and Mental Diseases, submitted the following resolutions, which had been approved by that Section:

Whereas, The House of Delegates of the American Medical Association has previously expressed its dissatisfaction with the present status of medical expert opinion evidence and has expressed its approval of the efforts of the American Bar Association and of the various bar and medical societies to correct by remedial legislation and by changes in court procedure the present undesirable features of the introduction of such evidence, and

Whereas, The American Psychiatric Association and the National Crime Commission are devoting much study to the subject of such evidence, particularly as relates to psychiatric matters in criminal cases, with a view to improving procedure, and

Whereas, The Criminal Law Section of the American Bar Association has appointed a committee to collaborate with a committee of the American Psychiatric Association in formulating plans for bringing about a betterment of the present undesirable situation, and

Whereas, Such efforts are of vital interest and importance to the entire medical profession, be it therefore

RESOLVED, That the House of Delegates of the American Medical Association express its continued interest in the correction of the abuse of medical expert opinion evidence, and that it offer to the American Bar Association,

the American Psychiatric Association, and the National Crime Commission, the various State and county medical and bar associations, and such other reputable organizations as are actively pursuing efforts directed toward such correction the assistance and co-operation of the American Medical Association in promoting the passage of appropriate legislation and in bringing about suitable changes in court procedure with reference to such evidence, and be it further

RESOLVED, That the House of Delegates approves the principle of securing in the case of all capital charges and in the case of as many other criminal charges as the psychiatric facilities of the State will permit an impartial and routine mental examination of the defendant in advance of the trial as a means of obviating the contentious introduction of partisan testimony, and that it approves further the principle of removing as far as possible the question of sanity from the trial itself, reserving the employment of psychiatric data for a post-trial inquiry to determine what treatment is appropriate to the convicted person, and be it further

RESOLVED, That a copy of this resolution be forwarded to the American Bar Association, the American Psychiatric Association, and the National Crime Commission.

On motion of Dr. Throckmorton, seconded by Dr. A. T. McCormack, delegate from Kentucky, and after discussion by various members of the House, these resolutions were adopted by the House of Delegates.

RESOLUTION FROM SECTION ON DERMATOLOGY AND SYPHILOLOGY

Dr. F. W. Cregor, delegate from the Section on Dermatology and Syphilology, submitted resolutions providing that treatment for hypertrichosis by the tricho system and by allied systems employing radiation be condemned as highly dangerous to the patient, and "that all cases presenting the effects of this type of treatment and seen by members of the medical profession be reported to the Bureau of Investigation of the American Medical Association." The resolutions were adopted.

AMENDMENT TO THE PRINCIPLES OF MEDICAL

ETHICS

The Judicial Council, in its report to the House of Delegates, recommended that Sec-

tion 3, Article VI, Chapter II of the Principles of Medical Ethics be amended by substituting the following:

COMMISSIONS

Sec. 3—When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may called or under any guise or pretext whatsoever.

This recommendation of the Judicial Council was adopted by the House of Delegates, and the Principles of Medical Ethics were so amended.

MESSAGE FROM PRESIDENT OF WOMAN'S AUXILIARY

Dr. J. H. J. Upham, member of the Board of Trustees, presented a report from the Woman's Auxiliary to the House of Delegates submitted by its President, Mrs. Allen H. Bunce of Atlanta, Georgia, and this message was accepted by the House and made a part of its records.

ELECTION OF OFFICERS

The following officers were elected:

President-Elect, William Gerry Morgan, Washington, D. C.

Vice-President, Ernst A. Sommer, Portland, Oregon.

Secretary, Olin West, Chicago.

Treasurer, Austin A. Hayden, Chicago.

Speaker of the House of Delegates, F. C. Warnshuis, Grand Rapids, Michigan.

Vice-Speaker of the House of Delegates, Albert E. Bulson, Fort Wayne, Indiana.

Member of the Board of Trustees, D. Chester Brown, Danbury, Connecticut, re-elected.

Member of the Board of Trustees, Allen H. Bunce, Atlanta, Georgia, to succeed E. H. Cary, Dallas, Texas.

The President, Dr. M. L. Harris, made the following nominations for standing committees:

Judicial Council, James B. Herriek, Chicago.

Council on Medical Education and Hospitals, M. W. Ireland, Surgeon General, U. S. Army; James S. McLester, Birmingham Ala.

Council on Scientific Assembly, Lewis H. McKinnie, Colorado Springs, Colorado.

These nominations by the President were confirmed by the House of Delegates.

HONORARY FELLOW

Dr. Josef Jadassohn of Breslau, Germany, was nominated for Honorary Fellowship by the Section on Dermatology and Syphilology and this nomination was approved by the Council on Scientific Assembly. Dr. Jadassohn was elected to Honorary Fellowship by the House of Delegates.

PLACE OF 1930 ANNUAL SESSION

Detroit, Michigan, was selected as the place for holding the next annual session of the American Medical Association in 1930.

Editorial Clippings

SPLITTING OF FEES

At the last annual session of the American Medical Association, on recommendation of the Judicial Council, the Principles of Medical Ethics of the Association was amended so that Section 3, Article VI, Chapter II, was made to read as follows:

COMMISSIONS

Sec. 3.—When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever.

The language of this statement is so explicit that it needs no elaboration or elucidation; it attacks directly a specific evasion of the direct statement that fee splitting shall be unethical by mentioning specifically the nature of that evasion. Moreover, it is broad enough to include any other evasion of the principle that may occur to the agile mind of any commercially minded physician who may wish to evade it. That it will cure the fee-splitter of his practice is perhaps too much to expect, since legislation, and even strict enforcement, have not done away with other evils of the body politic. Where ideals and morals are absent, and where the conscience speaks in a voice so still and small that its possessor seldom hears it, enunciation of principles cannot work a cure. Such statements do serve, how-

ever, to bring before the bar of medical opinion those who refuse to abide by them, to permit their divorcement from fellowship in medical organization with their colleagues, and to cast public shame on those who attempt to veil in secrecy practices that are pernicious to the public good.—*Jour. A. M. A.*, Aug. 17, 1929.

Personal and News Items

Dr. W. F. Smith and family have recently returned from a vacation in California.

Dr. S. C. Fulmer is attending the clinics in the East.

Dr. William E. Jones has returned from a vacation spent in Colorado.

Dr. A. E. Chace of Texarkana, Ark., has moved to Middletown, N. Y.

Dr. J. E. Little, Fort Smith, announces the removal of his offices from the Holt Clinic to 801½ Garrison Ave.

Dr. D. A. Rhinehart and family spent their vacation this year touring in Arkansas, Louisiana and Texas.

The meeting of the Southern Medical Association will be held in Miami, Florida, November 19-22.

Dr. Robert Caldwell has been elected vice-president of the Federal Bank and Trust Company, Little Rock.

Dr. Jas. W. Amis has recently opened offices at 705 First National Bank Bldg., Fort Smith, Arkansas.

Dr. John L. Jelks of Hot Springs announces the association with him of Dr. Charles C. King. Practice limited to abdominal surgery and procto-enterology.

PHYSICIAN WANTED: To locate in Beech Grove, Green County. No better place in Arkansas for an M. D. Write J. H. Breckenridge, P. M., Beech Grove, Arkansas—*Adv.*

Dr. W. H. Poynor of Harrison had as his guest on a fishing trip recently, Doctors F. Walter Carruthers, S. F. Hoge and George F. Jackson of Little Rock. A large catch of beautiful black bass was made on the trip and his guests had an enjoyable outing.

The Boone County Medical Society conducted a free clinic at the Court House in Harrison on Monday, September 2, 1929. The members of the Society were assisted by Doctors F. Walter Carruthers, S. F. Hoge and George F. Jackson of Little Rock.

A large number of cripple children and adults as well, were seen and advised as to treatment by Dr. Carruthers.

Dr. S. F. Hoge made the general physical examination of all medical cases and Dr. Jackson advised as to the dermatological findings.

This was one of the largest and best attended clinics ever held in Boone County. The Society expects to make them a yearly affair.

At noon, luncheon was served and an enjoyable time was had by all.

The American College of Surgeons will hold its nineteenth annual Clinical Congress in Chicago, October 14-18. Headquarters will be at the Stevens Hotel. An intensive program is being planned to make this home-coming event the greatest in the history of the College.

A feature of the Congress will be the showing of surgical films that have been produced under the supervision and approved by the Board on Medical Motion Pictures of the College. New developments in color photography will be demonstrated. In addition to the Commercial exhibits, there will be scientific exhibits by the departments of the College.

WOMAN'S AUXILIARY, AMERICAN MEDICAL ASSOCIATION

Post Convention Meeting of the Board of Directors

Portland, Ore., July 11, 1929

In accordance with the Revised By-Laws the first meeting of the Board of Directors of the Woman's Auxiliary to the American Medical Association, was called to order by the President, Mrs. George H. Hoxie, Thursday, July 11, 1929, at Multnomah Hotel, Portland Oregon. Mrs. Allen H. Bunce, acted as Secretary pro tem.

The attendance was not limited to the members of the Board and the meeting was well attended there being more than fifty women present.

The Minutes of the Executive Board Meeting of July 8th were read by the Secretary corrected and approved.

The following Committee Chairmen, previously approved by the Executive Committee were reported by the President:

Program.....Mrs. E. V. DePew of Texas
(Previously known as Health Education)
Finance.....Mrs. John Preston of Virginia
Legislation.....Mrs. C. W. Garrison of Arkansas
Public Relations.....

.....Mrs. Marion T. Benson of Georgia
Hygeia.....Mrs. A. B. McGlothlan of Missouri
Revisions.....Mrs. J. N. Hunsberger of Penn.
Press and Publicity.....

.....Mrs. Allen H. Bunce of Georgia
Printing.....Mrs. C. B. Forcey of New Jersey
Social.....Mrs. Southgate Leigh of Virginia

Mrs. C. B. Arnold of Kansas City, Missouri, was appointed Corresponding Secretary.

The President reviewed some of the discussions at the annual Meeting, referring especially to the conflicting opinions expressed on the old troublesome problem of State Rights versus Federal responsibility in the field of Public Health, and expressed the hope that some plan might result from the work of President Hoover's Child Welfare Commission under which Federal and State Health Departments, the organized Medical Profession and lay organizations might be able to co-operate for disease prevention and health promotion.

She expressed the feeling that in the meantime instead of dissipating our energies in worry over State medicine and federal bureaucracy, we should devote our time to work on the necessity of which we all agree namely, self education, education of our membership on the fundamental principles of health promotion and disease prevention which are evolving from scientific medicine; education of the public along the same lines in order to speed up the organization and efficient administration of full time scientific health departments, especially in the rural districts.

With this purpose in mind the President asked for the consideration and discussion of two important problems:

First. Getting reports of the National Auxiliary and National Board Meetings, as well as

of regular reports of study programs and of constructive work being undertaken in the States and counties, into the hands of County Auxiliary members, since lack of funds makes impossible the publishing of National reports or of a National Bulletin, and,

Second. The necessity of helping the County Auxiliaries with their study programs through the Program Committee. The President stated that from her experience in State work it is her frank opinion that most County Auxiliaries depend largely for study material on their State Boards and that few Boards were supplying such help. This dependence on the part of County Auxiliaries is perhaps due to lack of library facilities in the smaller communities and the lack of contracts with trained health officials.

Following the discussion of the first problem the Board approved the recommendation of the Executive Committee, that the State Auxiliaries be asked to do whatever is necessary to secure regular space in the State Medical Journals for reports of National Meetings and that the State Auxiliaries be further asked to report from time to time on valuable work done by their States' Boards or by their Countys' Auxiliaries. The President was authorized to ask the Program Committee to act as a clearing house for such reports, sending what it considered valuable material back to the States' Auxiliaries with the request that the material be printed whenever possible in the States' Medical Journals.

This led to a discussion of ways and means of getting doctors' wives to read the Auxiliary pages in the Journals. Mrs. C. W. Garrison of Arkansas reported that the Auxiliary in her State had succeeded in having the Journals mailed to the doctors' residences instead of to their offices in order to accomplish this.

The Board recommended to the Program Committee that it do everything in its power to increase the number of Journals giving space to Auxiliary news, and to stimulate the States in educating their members to read the Journals.

In the discussion of the second problem, the President asked the opinion of the members present on what she called the "Lesson Envelope Plan" for use at meetings of rural Auxiliaries, each envelope to contain a list of stimulating questions accompanied by printed and mimeographed articles culled from the Journal of the American Medical As-

sociation, Hygeia, Health Magazines, which answer and discuss the questions. The Board further recommended to the Program Committee that it experiment this coming year with the "Envelope Plan" preparing a few and offering them to the States for County Auxiliary Meetings. Again, it was recommended that the States using them be urged to pay the cost if at all possible.

The President was now authorized to have printed 3,000 copies of the By-Laws if the Budget permitted, for distribution among the National Officers, State and County Auxiliaries.

The general feeling expressed by the Board was that hereafter when a State Medical Society invites a National Auxiliary Officer to attend a State Meeting for the purpose of organization, the traveling expenses of the organizer should be paid by the Medical Society.

The Meeting adjourned at 11:40 A. M. thus bringing to a close the Seventh Annual Session.

MRS. ALLEN H. BUNCE,
Secretary, pro tem.

MRS. GEORGE H. HOXIE,
President.

THE STATE SOCIETY FOR CRIPPLED CHILDREN

The result of three years of organization work of the Arkansas Society for Crippled Children is about to become effective now throughout the State, as a result of the action of the Legislature of 1929. "The responsibility for the care of crippled children in Arkansas is now fixed where it rightfully belongs—on the State, through the Arkansas Commission for Crippled Children." "The law creating the State Commission calls for the co-operation of the several counties in levying a tax to care for and educate crippled children. Every interested person and agency should plan at once to federate their efforts through the Arkansas Society for Crippled Children in support of the Commission."

"The decentralized plan of care represented in this new law," according to Harry H. Howett, Executive Secretary of the International Society, "is the most economical program for a State to follow. It reaches the greatest number of cripples and it is just and fair to the parents of crippled children, because they can get approved care near their own homes; and

it saves the State the expense of building and maintaining new institutions by using the public and private facilities already existing within the State. Persons interested in getting in touch with this new State and county service should write at once to Mrs. J. S. Jenkins, the Executive Secretary of the Arkansas Commission for Crippled Children, 213 W. Barraque Street, Pine Bluff."

The International Society for Crippled Children expects the citizens of Arkansas to give wholehearted support to this Commission in its effort to help crippled children and their parents to help themselves."

THE KANSAS CITY ANNUAL FALL CLINICAL CONFERENCE

of the

KANSAS CITY SOUTHWEST CLINICAL SOCIETY

In this issue of the Journal there appears a condensed program of the Kansas City Southwest Clinical Society's seventh annual clinical conference to be held at Kansas City, Missouri, October 7th to 11th, inclusive. Seldom has there been such an array of distinguished guests on a program as is noted in this meeting and this seventh conference of this organization is expected to be the biggest and best it has ever had.

Two special sessions should be noted, namely that of the joint meeting with the Kansas City Eye, Ear, Nose and Throat Society on Tuesday evening with Dr. Finnoff of Denver, Dr. Jackson and Dr. McCrae of Philadelphia as the principal speakers; and that of Thursday evening, a joint meeting with the American Committee for the Control of Rheumatism. The subject of arthritis which is to be discussed by the Committee at this meeting should be most interesting and instructive.

The usual clinics at the Allied Hospitals will be held each morning and the ever popular Round Table Luncheons with short addresses by distinguished guests will be held each noon.

Plenty of entertainment has been provided, the Smoker on Tuesday evening, the Alumni Dinners on Wednesday evening, the Golf Dinner on Friday evening, in fact nothing has been neglected in trying to make the entire meeting the most profitable and instructive of any meeting held in the Southwest.

Obituary

MAYFIELD, ANDREW MEEK—Dr. A. M. Mayfield of El Dorado died August 20, 1929. Aged 47. He died suddenly in Monroe, Louisiana, while en route to New Orleans with his wife. Death was due to apoplexy.

Dr. Mayfield is survived by his widow, three sons, Jean, Fred and Ross Mayfield; two brothers, Percy and Minor Mayfield of Monette, Arkansas, and his step-mother, Mrs. Annie Mayfield.

County Societies

DALLAS COUNTY

(Reported by J. E. M. TAYLOR, Sec.)

The regular meeting of the Dallas County Medical Society was held August 10, at Manning, with all members present. Visitors present were: Drs. Townsend and Rowland of Arkadelphia; Dr. Rhine of Thornton; Dr. March of Fordyce and Dr. Lisenbee of Sparkman.

Dr. N. R. Townsend, Arkadelphia, gave a lecture on Focal Infection, followed by a round table discussion.

A delicious chicken dinner was served by Dr. and Mrs. A. M. Stuart.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The Mississippi County Medical Society was entertained at the August meeting by the doctors of Osceola with a chicken dinner.

Present: Barksdale and Ellis, Wilson; Johnson, Bassett; Hosey and Campbell, Joiner, Howton, Luxora; Fox, Denton and Hutchins, Manila; Polk, Keiser; Owen, Washburn, Saliba, Grimmett, Husband and Smith, Blytheville. Also the following visitors from Memphis, Tenn.; W. C. Chaney, C. H. Heacock, R. C. Bunting, R. Bowen, E. H. Adams and F. D. Linn.

Scientific program as follows:

"Care of Children During Pre-School Days," by Dr. E. V. Hill.

"Frontal Sinus Infection," by Dr. J. A. Saliba.

"Some Problems of Interest to the Child," by Dr. R. Bowen.

Abstract

DIET IN TUBERCULOSIS

In order to get accurate and up-to-date information on diet in tuberculosis and to present the matter of feeding the tuberculous patient in a plain and practical way available for general practitioners, John B. Hawes, 2d, Boston (*Journal A. M. A.*, Aug. 10, 1929), wrote personal letters to forty or fifty men in this country, each one a well known specialist on this subject, asking eight questions. He received thirty-six excellent and detailed answers. Summarizing the opinions of these physicians, including his own, in regard to diet in tuberculosis, it is fair to conclude that: Lunchees between meals are rarely advisable. The average patient enjoys his food more and takes a larger amount of nourishment when he confines himself to three good meals daily than in any other way. Egg-nogs in any form at any time are "an invention of the devil." Raw eggs, if easily borne and if the patient is underweight, do not do any harm and may do good. They are not so digestible as cooked eggs and on the whole are rarely indicated. About 1 quart of milk daily, four or five glasses, with meals, is the maximum amount that should be given. A glass of milk with each meal is usually sufficient. There are no special foods that need be emphasized. Fruit and colored vegetables will help correct constipation; they contain vitamins but little if any nourishment. Potatoes, macaroni and rice contain much food value. The bowels should act at least once daily. A mild laxative once a week is often a valuable help if a diet with plenty of roughage is not enough. Five or six glasses of water daily with and between meals is advisable in every case. A rest before and especially after each meal is essential. The dictum "Approach and leave each meal in a rested condition" is an extremely good one to stick to.

UNITED STATES PUBLIC HEALTH SERVICE

DISTRIBUTION OF ENDEMIC GOITER IN THE UNITED STATES

Studies conducted by the United States Public Health Service during recent years indicate that the distribution of goiter in the United States as disclosed by numerous thy-

roid surveys, parallels in general, the goiter findings which were recorded among the drafted men examined during the World War.

There are manifestly wide variations in the methods of determining thyroid enlargement. The classification of various degrees and types of involvement also ranges within wide limitations. Uniform procedure is a necessity if findings in different sections of the country are to be compared.

Based upon the occurrence of goiter, whole sale prophylaxis by means of the use of small doses of iodine either as iodized salt or otherwise for endemic goiter is apparently not required in all States.

Individual thyroid surveys disclose foci of endemic goiter in localities not previously regarded as being located in goitrous territory.

Resurveys are desirable for the purpose of learning the extent and character of changes occurring either under natural conditions or after prophylaxis has been instituted.

THE ACTION OF DIGITALIS IN HEART FAILURE

Clinicians have generally accepted the pharmacologic evidence that digitalis causes a more vigorous and larger ventricular contraction. But it is difficult to accept the view that a muscle such as the heart, which cannot rest after being overstimulated, is improved by being forced to beat harder. It has now been shown that the efficiency of the heart, or its capacity for doing a fixed amount of work with least oxygen consumption, varies inversely with its diastolic volume. It was shown further that digitalis causes the heart to decrease its diastolic volume while carrying a constant load. Thus, digitalis reduces the energy requirement of the heart or permits it to do more work with the same expenditure of energy. (*Jour. A. M. A.*, August 17, 1929, p. 548.)

HYGEIA EXPLAINS HOLLYWOOD DIET

One might have thought that the volumes and reams of paper expended in overcoming the last craze for slenderization would have worked a permanent cure and that femininity would no longer be tempted by strange combinations of lamb chops with pineapple, lettuce and hardboiled egg, or other arrangements guaranteed to cause the *avoiirdupois* to melt from the shanks like the glacier snows from the timber line of Mt. Hood in August,

observes the editor of *Hygeia*, the health magazine, in an editorial in the September issue anent the eighteen day diet that has recently agitated the ranks of those interested in reducing weight.

Although it is freely asserted that the list is the result of five years of cogitation on the part of leading French and American physicians, it can be taken for granted because of the emphasis on grapefruit and oranges that the eighteen day diet, also known as the Hollywood diet, emanated from California.

The diet provides from 500 to 800 calories per day, some days approximating almost a thousand. Most persons normally eat about 3,000 calories a day. On such a diet one is bound to lose weight too rapidly. Authorities insist that a loss of more than 2 pounds per week is not healthful. The right way to lose weight is to take a diet which does not provide more than 1,400 calories per day and which contains the proper foods to supply proteins, carbohydrates, fats, mineral salts and all the vitamins.

Book Reviews

Recent Advances in Chemistry in Relation to Medical Practice—By W. McKim Marriott, B. S., M. D., Dean and Professor of Pediatrics, Washington University School of Medicine; Physician-in-Chief, St. Louis Children's Hospital. Illustrated. Published by The C. V. Mosby Company, St. Louis, Mo. Price, \$2.50.

The lectures given in this book summarize present knowledge concerning the clinical applications of chemical principles.

International Clinics.—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Published by J. B. Lippincott Company, Philadelphia.

This volume presents many interesting articles pertaining to endocrinology; 1928 Harrington Lectures; Diagnosis and Treatment; Medicine; Pediatrics; Surgical Gynecology and Surgery.

An attractive colored plate is shown in the frontispiece, "An operative step in extra-pleural thorocoplasty."

Problems in Surgery; University of Washington Graduate Medical Lectures for 1927.—By George W. Crile, M. D., edited by Amy F. Rowland. Octavo volume of 171 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth \$4.00 net.

The six chapters of this book are on the following topics: 1. The Management of the Acute Infections. 2. A General Consideration of the Treatment of Premalignant and Malignant Conditions. 3. Operations on the Bad-risk Patient. 4. The Mechanism of Hyperthyroidism. 5. Diagnostic and Operative Clinic. 6. A Bipolar Interpretation of Certain Normal and Pathological Conditions.

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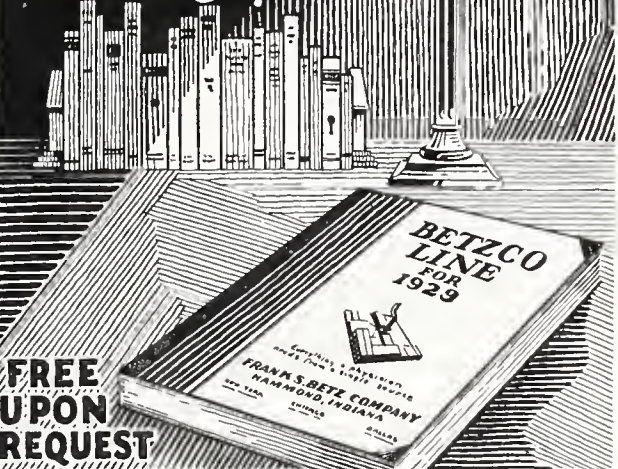
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*Sugar was once the prized
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THE USE of sugar affords a good example of the service of science to man, and the changes that we may expect in our food supply in this country. Sugar has been all around us for countless ages, but we did not know how to get it. In Queen Elizabeth's time, a pound of sugar cost as much as a quarter of veal. One of the principal expenditures of King John of France when, following the battle of Poitiers, he was being taken to England, was for sugar, one of the kingly luxuries of the day. In the present day, of course, few foods can compete in price with sugar in their economy of fuel value.

The chief dietary interest in sugar today, however, with the exception of active children and physically active adults, centers in its value as a condiment.

Scientific and medical authorities insist upon the mixed and varied diet. Most food substances if eaten alone would be bland and unpalatable. A dash of sugar in milk desserts, on berries and in stewed fruits, on cereals, in vegetables and meats while they are cooking may result in a regimen relished by both children and adults.

No one should gorge or overeat of sugar or sugar-containing foods, or any other food. Neither need anyone, without the advice of a physician, undertake to eliminate sugar or any other valuable food from the diet. Variation, diversity, variety and balance are the requirements of the healthful diet. Most foods are more delicious and nourishing with sugar.

The Sugar Institute, 129 Front Street, New York, N. Y.

THE JOURNAL

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Arkansas Medical Society

PUBLISHED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XXVI

LITTLE ROCK, ARK., OCTOBER, 1929

No. 5

Original Articles

VALUE OF X-RAY EXAMINATION OF THE GASTRO-INTESTINAL TRACT*

W. R. BROOKSHER, JR., A. B., M. D.
Fort Smith.

No method of examination has done more for improvement in diagnosis of abdominal conditions than the development of roentgenography of the gastro-intestinal tract. Dr. Richard Cabot has said "the roentgen findings are worth more than all the other laboratory diagnostic means combined in gastric disease."

This paper is presented on the x-ray examination of the gastro-intestinal tract not with the idea of presenting anything new in technic but to emphasize certain points connected with such an examination, and to indicate what may reasonably be expected with proper technic.

Roentgenologists, like other folks, are prone to fall into the habit of doing things the easiest way. Thus, proper time for preparation of the patient, to allow for proper accommodation of the eyes and the making of a comprehensive fluoroscopic study are neglected.

Often it is the referring physician who is to blame for the hurried examination. It is he who calls the roentgenologist at eleven in the morning, saying there is a patient in the office and he would like to send him over right away for a GI examination. Further, this patient lives out of town, or cannot leave his business but for a short time and will we please hurry up and rush him through and report back as quickly as possible.

Wishing to be accommodating and most likely needing the business, the roentgenologist reluctantly starts the quasi-examination. Properly done, the examination often requires re-

checking and refilling of the stomach and observation of the patient for three, four or more days. The old adage applies that the thing worth doing is worth doing well.

If receiving the patient before ten in the morning, and with little or no breakfast taken, the examination may start at once. Later in the day, it would be a roentgenologist's desire that the patient return the next morning. No laxative is given before the examination. Similarly, none is given during the progress of the procedure.

Gall-bladder examination with the dye should be done in every instance and particularly so when the other findings are negative and no indication for abdominal section exists. Present day technic in this field is over ninety per cent correct in diagnosis.

The fluoroscopic examination is then made the following day. This part of the examination is, unfortunately, much neglected by many due to fear of exposure as well as from pressure of work in the laboratory. Yet for actual information obtained, fluoroscopy is worth 90 per cent and the films 10 per cent.

Sufficient time must be given for accommodation of the eyes; fifteen to twenty minutes is not too long, although this may be decreased by wearing of dark glasses before entering the dark room. Proper accommodation of the eyes will reduce the exposure time and greatly increase the accuracy in interpretation of findings.

A preliminary fluoroscopic examination is made of the chest. Turning the patient to the left, the barium meal is given him to drink and its progress down the esophagus is watched. Irregularities or constrictions of the esophagus are noted. A later observation is made of the esophagus for retention suggestive of diverticulum, when a thick paste of barium may be given for the additional information thereby obtained. With the filling of the stomach, its size, shape and position are noted. The curva-

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

tures are scanned for irregularities or niches. As these usually appear, attempts are made by pressure and change of position to fill these out. Here the fluoroscopic examination will show that what appears to be a filling defect on the film in reality fills out. Tonicity, peristalsis and mobility are noted together with observation of the initial clearance of the filled stomach.

The examination then proceeds to the first portion of the duodenum commonly called the cap, which is where the fluoroscopic examination is of utmost value, since the cap remains filled only momentarily. Serial films of sufficient number may disclose a normal cap, but most of them will show the cap only partially filled or show an apparent filling defect. In serial films it must be remembered that one film showing a normal cap negatives any number showing defects.

Deformities are observed as to position, size, character and point of tenderness to assist in diagnosis.

Primarily for record and frequently to exhibit to the referring physician, two to four films are now made. The patient may eat a light meal at this time, or take no food at all, depending upon the individual roentgenologist's practice and returns in six hours for further observation. In some laboratories, the so-called double meal method is employed, whereby the patient takes the first barium meal early in the morning and reports to the laboratory six hours later when, following observation of the six hour meal previously taken, a second meal is given. Both methods have their proponents.

The six hour examination has as its purpose the observation of the emptying time of the stomach, it being regarded as pathological if there is an appreciable residue at this time. The progress of the meal is noted and it is usually found in the ascending or transverse colon. Any variation is noted as an indication of hyperistalsis or atony. The meal may be found at the ileo-cecal valve, suggestive of some type of obstruction there. The patient eats the usual evening meal and breakfast the following morning unless it is desired to refill the stomach.

At the twenty-four hour period the meal is distributed throughout the sigmoid, rectum and colon. If the large bowel is filled, tonicity, character of haustra and presence or absence of adhesions is determined. The cecum

should be fairly movable and the appendix may be observed. The appendix is not always observed even though filled as it may be post-cecal and attached by a short mesentery, preventing its manipulation in line of vision. Ptosis of colon or of stomach when observed is not so much an item of concern as whether or not motility and function are normal. If there is suspicion of diverticula, examinations beyond the twenty-four hour period are made as are done if the large bowel remains filled.

The colon is rarely filled sufficiently to warrant a positive opinion. The opaque enema is then given under the screen which fill the colon throughout in two or three minutes in the absence of obstruction. The entire colon may then be studied. Roentgenologically, the opaque enema offers the only method of satisfactorily studying the colon; the dilated cecum and ascending colon from angulation at the hepatic flexure, or the latter part of the transverse colon from similiar pathology at the splenic flexure. Spasticity, antonicity, partial obstructions, new growths and the redundant and dilated sigmoid are also best examined by this method.

The findings as above obtained are then detailed in the report to the clinician with the conclusions of the roentgenologist. A history is not taken as it is presumed that the clinician has done this and arrived at the opinion which it affords and now only desires the opinion of the roentgenologist. Following delivery of the completed report, a conference between the referring physician and the roentgenologist is wise and will prove of value to both as well as to the patient.

In conclusion, there are two important facts to be recognized in connection with digestive tract diagnosis; all patients in whom an organic lesion is suspected should be referred to the roentgenologist as well as patients concerning whom a doubt exists; and the roentgenologist should be allowed plenty of time to work out his part of the consultation.

DISCUSSION

DR. R. H. T. MANN, Texarkana: I don't see how we can get along without the x-ray man. I want to offer a suggestion. Suppose you call it the Arkansas method. You might call it that. It's a simple thing. And that is, when you take an x-ray picture of a man, start at the top of his head and end at the bottom of his feet. Really I am not joking about it. You will find a great many sinus disease existing which you don't expect and when you get to his feet you find a great many fallen arches. So, really take an x-ray pic-

ture of the patient from the top of his head to the toes of his feet. Doctor, I want to thank you very much.

DR. BROOKSHER, in response: I haven't anything to say in discussion. I merely present this paper from the roentgenologist's viewpoint so that we can let you know what we mean by a gastrointestinal study. We have more difficulty in conducting a proper gastrointestinal examination than any other examination in the field of roentgenology. As to the president's remarks on the examination from head to toe, that's fine. I wish everybody would do it.

THE MANAGEMENT OF DUODENAL ULCER*

H. W. HUNDLING, M. D., F. A. C. S.
Little Rock

There has always been a great deal of controversy between the internist and surgeon in regard to the proper treatment for uncomplicated duodenal ulcer. The internist has been reluctant to refer the ulcer patient for surgical treatment because he has seen an occasional recurrence or unsatisfactory result later. On the other hand, he feels that medical treatment may accomplish a great deal, and the nature of the disease is such as to encourage this belief. We know that periodic recurrence of the symptoms usually comes in the spring and fall of the year, and lasts only three or four weeks. Frequently the symptoms subside when medical treatment is well under way, and both the patient and physician are convinced that the process is arrested or the lesion healed. Since the patient is usually up and about and able to continue his work he is often content to follow this treatment indefinitely.

Unless the symptoms are severe, or complications arise, hospital treatment is not always advised. This is partly due to the fact that but few patients are financially able or content to repeat this procedure indefinitely, during the periods of recurrence, and partly because many internists realize that hospital treatment is no more satisfactory than ambulatory treatment, except that it does teach the patient to take better care of himself.

The young patient with a short ulcer history, whose acids are low, who apparently has a small and uncomplicated lesion, and who is not suffering much pain, should by all means be treated medically. This also holds true for

the patient with an atypical ulcer history, and especially for the one with an unstable nervous system, whose symptoms are suggestive of ulcer, but whose condition is functional. If we are convinced that reflex spasm resulting from a diseased appendix or gall-bladder, or both, is responsible for the ulcer picture, these organs should be treated surgically.

You are all familiar with the routine medical treatment for ulcer, but I should like to emphasize the danger of the administration of excessive amounts of alkalis. Occasionally an alkalosis will develop, and the treatment may prove to be more serious than the disease. The removal of foci of infection cannot be overemphasized since Rosenow has so beautifully demonstrated the selectivity of certain organisms especially the streptococci, for certain tissues. By injecting pus from infected teeth or tonsils of patients with duodenal ulcer into laboratory animals he has repeatedly reproduced the same type of lesion in the intestinal tract.

There can be no doubt that a certain number of ulcers are healed by medical treatment. We hear of many cases in which the symptoms have been arrested, and this most likely was brought about by a healing of the lesion. Whether or not they will remain inactive will require a considerable period of observation. Medical management, then, should be urged in all cases of duodenal ulcer, unless complicated, and should be given a fair trial. The patient, however, should not be given a false sense of security; but should be warned that complications may arise, in spite of the cessation of symptoms. I recall the case of a young man, thirty-six years of age, who, after prolonged treatment by a good internist, was advised that his duodenal ulcer was healed. He became careless about his diet and habits, and three months later died of perforation of the ulcer, in spite of surgical intervention.

Very often the patient is the judge in choosing the time for surgical treatment. About ninety per cent of the ulcer victims will demand relief because of pain, which in many instances is severe or annoying enough to incapacitate the individual. Gastric disturbances between the periods of recurrence and discouragement over the failure of repeated treatments usually help to convince the patient that surgical treatment is worth while. Because of the fact that medical management is often carried out over long periods of time Doctor W. J. Mayo has often remarked that the patient with

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a duodenal ulcer comes for surgical treatment after nine complete and permanent medical cures. Fortunately, the results following operation are more satisfactory in the patients who have a long ulcer history, especially if the acids are high, and if a certain amount of obstruction has developed at the pylorus.

On the surgical side we are partly to blame for the reluctance of the internist to advise surgical treatment for his ulcer patient, because we have sometimes drawn conclusions about the results of operation before sufficient time has elapsed to determine the outcome. At the time of operation an incomplete exploration may have resulted in overlooking a diseased gall-bladder and appendix. Furthermore, we have not been insistent enough with the patient in regard to his diet, the frequency of the feedings, the use of tobacco and alcohol, and the removal of foci of infection. Here is an opportunity for co-operative treatment which will yield big dividends, and instead of the surgeon attempting to outline the post-operative treatment, the patient should be referred back to the internist, and the same strict medical management carried out for a time as was done pre-operatively. In many cases the patient is to blame for untoward results, because he feels that since he has had an operation nothing can happen, and he is unwilling to follow instructions.

The surgical procedure in any particular case will depend entirely upon the type of ulcer, its size and location, the depth, whether or not it is of the bleeding type, and its relation to the surrounding tissues. There is no standard operation for ulcer of the duodenum, and the surgeon must have sufficient experience with cases of this nature to know which type is best adapted for the case in question. If there is any doubt about the presence of an ulcer the duodenum should be opened, for the lesion may be located on the posterior wall. In the event that an ulcer is not present gastro-enterostomy should never be performed, for it invariably causes trouble and will have to be disconnected later.

Surgical treatment should attempt to dispose of the lesion, if possible, should relieve intra-gastric tension, and preferably reduce the acidity. Probably no other operation has proved as valuable for gastric and duodenal lesions as gastro-enterostomy, and the occasional development of a gastro-jejunal ulcer is the worst drawback to this procedure. Cer-

tain patients apparently have an ulcer predisposition, and it seems that ulcers will develop again in spite of all precautionary efforts. If we were but able to determine this predisposition beforehand a radical operation might be done at once, and future trouble avoided.

In some sections of the country, especially the East, gastro-enterostomies for duodenal ulcers have fallen in disrepute because of the high incidence of gastro-jejunal ulcers, varying from nineteen to thirty-four per cent in some cases. At the Mayo Clinic a vast amount of gastro-intestinal surgery has been done, and the cases carefully followed up. Several years ago Balfour reported one thousand cases of duodenal ulcer in which a gastro-enterostomy had been performed at least ten years previously. There was relief of symptoms in eighty-eight per cent of the cases. Of the remaining twelve per cent, three and five-tenths per cent had a recurring ulcer, either in the stomach, the duodenum, or the stomach; five per cent had recurrence of the hemorrhages, and three and five-tenths per cent were not improved. To determine the incidence of gastro-jejunal ulcer he reviewed eighty-six hundred cases of gastro-enterostomies performed at the Clinic for both gastric and duodenal ulcers, and found this complication in two hundred and seventy cases or one and six-tenths per cent. This is a rather marked contrast to the thirty-four per cent reported by Lewisohn and Ginzberg.

Because of the occasional unsatisfactory result following gastro-enterostomy, there has developed a tendency toward radicalism, especially in Europe, and a partial gastrectomy with removal of considerable of the acid-bearing portion of the stomach is done in many cases of duodenal ulcer, the theory being advanced that an achlorhydria will prevent ulcer formation. Balfour found that in twenty per cent, or one-fifth of the cases with gastro-jejunal ulcers, there was no free hydrochloric acid, thus disproving this theory. In this series fifty-six per cent of the recurrences developed in the first year, but the average time between the first operation and the operation for gastro-jejunal ulcer was four and one-half years. Some of the patients had trouble as late as twelve years after the original operation.

Partial gastrectomy has not been tried over a sufficiently long period to determine whether

or not it will solve the recurring ulcer problem, for already several such instances have been reported. Gastro-enterostomy is especially satisfactory, because it is not so radical, and affords a chance for further treatment later, in case a gastro-jejunal ulcer develops. Pyloroplasties, although not as popular as they were some years ago, are very satisfactory in some cases, especially since most of them provide for excision of the ulcer. An operation was described by Judd several years ago which has proved to be apparently ideal in a great number of cases if the lesion is not inaccessible. It consists of the excision of the ulcer with removal of the anterior half of the pyloric ring, thus destroying the sphincter activity.

We shall not take time to enumerate the other operations which have been devised for the treatment of duodenal ulcer, but it is fairly safe to say that unless some new procedure is brought forth which will eliminate the unfavorable features of those now in common use, the operation of gastro-enterostomy, properly performed, will probably still be the one most nearly satisfactory in a majority of the patients with duodenal ulcer.

What are the most likely causes for the unfavorable results after gastro-enterostomy? The factors to be considered are: Untreated foci of infection; the use of improper suture materials; rough handling of and injury to the tissues; poorly or improperly placed anastomoses; improper drainage of the stomach; too small stoma; and probably most important of all, improper diet and the use and abuse of tobacco and alcohol.

CONCLUSIONS

1. The patient with uncomplicated duodenal ulcer should be treated medically if the patient is young, if the disease is of short duration, and if the history is atypical.
2. Foci of infection should be eliminated, and the use of tobacco and alcohol discouraged.
3. Best results are obtained surgically in patients with an ulcer history of long standing with high acids, and some pyloric obstruction.
4. The patient should be referred back to the internist for instructions in regard to diet and the proper mode of living.
5. Partial gastrectomy may prove to be very satisfactory for the treatment of duodenal ulcer, but sufficient time has not elapsed to determine its real merit.

6. Gastro-enterostomy is a satisfactory operation in a great number of cases and gastro-jejunal ulcer is not so common where the operation has been standardized.

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DISCUSSION

DR. W. F. SMITH, Little Rock: I certainly enjoyed Dr. Hundling's very able presentation of this quite prevalent and very bothersome subject. He has presented the question of the operative technique and the results in such detail that I don't feel that there is very much that can be added to it.

What he said about the patient who has been successfully operated upon with a total recovery as far as the patient can see, and the patient thinking that he is well goes out and doesn't observe the usual follow-up treatment, is going to be one of the discouraging features of work of this kind. It is a hard matter to get patients, when they are apparently in good health, to observe the necessary dietary rules and regulations, and I want to stress particularly what the doctor said about the bad effect in these cases of the use of tobacco or alcoholics in any form.

DR. C. M. GRIGSBY, Dallas, Texas: I appreciate the doctor's paper. The only thing I can add to it is this: In our clinic we have men who specialize in gastroenterology. I have watched their cases. Of course, doing internal medicine, I see about as many of them as they do first. Oftentimes I turn them over to the gastroenterologist. And certainly it is a tossup in my mind whether or not hospital treatment is any better than ambulatory treatment. I see many cases that, just as long as we can keep them on a diet and as long as we can impress them with the necessity of doing without alcohol and tobacco and to eat in moderation and to eat five times a day instead of three times a day, they get along just as well, these ambulatory cases, as the hospital cases.

I think what the doctor mentioned about the patient learning a great deal about himself and

about the gastric ulcer by being in the hospital is important, provided, that it isn't a question of whether or not they are able to stay in the hospital a month or six weeks.

But in the operative cases, I never turn them over to the surgeon until I do everything I can to relieve them. And then, especially the bleeding ulcers are the ones that I think should be operated and many of them are cured. I think our results are similar to those of the essayist.

I have in mind a very prominent man in Oklahoma who had bleeding ulcer over a long period of time; I think for about six years. We operated upon him and for four years he had no trouble at all, and then began to bleed again with severe hemorrhages both from the stomach and principally from the bowel. When he began to bleed he could tell it himself, and immediately he would come back and we would put him to bed and try everything in the world we could to relieve him. We knew that he had bleeding from the gastroenterostomy, and that his old duodenal ulcer was healed, as far as we could make out by x-ray examination. We transfused him a number of times. We took down the gastroenterostomy, and he is now, as far as I can see, entirely well.

But I feel this way about it, that gastrectomy is a very serious operation. I have seen many patients die from the operation. So I try every way in the world to keep from operating.

DR. H. E. MURRY, Texarkana: I wish to thank Dr. Hundling for this very fine paper. I think it was complete in every detail, as complete a paper as I have ever listened to. A thing that he brought out was the comparison of results outside of the hospital and in the hospital. I feel that absolute rest treatment, say, for ten days, in the hospital is most important. How many patients at home are able to take care of themselves, and take their feedings at the proper time and will do it? My experience is that they will forget and let one thing and another interfere. One duty and another will bring them outside of the home and the first thing you know you can't be sure whether or not you have had proper co-operation in carrying out the well-known specific treatment.

I think the doctor emphasized the foci of infection feature very well.

Another thing: I think that these patients should probably not be told that they are well until at least five years have passed. If the patient is told that he is well, just as the doctor mentioned in his paper, very often they begin to eat, and lots of them drink, and put things into their stomachs that are entirely wrong for a case of this kind. A patient, I believe, should not be told that he is well under five years. If we warn them that they are not well under five years, then perhaps we get better co-operation. I have enjoyed the doctor's paper very much.

DR. J. T. PALMER, Pine Bluff: If a patient comes to you with some gastric disturbance, and you treat him, you are not sure whether you shall operate him or not. Dr. Mann, being a specialist, I know he thinks most of our ailments come from some foci of infection. Most of them do. As to whether a man is ever cured by medicine or surgery either is a moot question, as the doctor has just told you.

One of my neighbors had a gastroenterostomy performed by one of the ablest surgeons of the country and ten years later he came near bleeding to death, but there was cause for that. I think he would have remained well had he behaved

himself in the way of eating. He was determined that he would eat nothing but fried food all the time. He was going to have his sausage, and his bacon, and his fried eggs, and his pancakes and syrup whether or no. As a result he came near bleeding to death. But since he has been convinced of the error of his way, taking a different diet, eating vegetables and boiled foods, he has regained his weight and is apparently well. But, when it comes to statistics, a fellow can just juggle those things around until you don't know whether you are going or coming. I think these cases should all be treated in a conservative manner.

I know when all these doctors go out of here, every one of them will discuss this among themselves, and sixty or seventy per cent of them say they are curing gastric or duodenal ulcer, but they won't talk that in here. Here is the place to talk it because I get as much out of the discussion as I do out of the paper. The doctor wrote a very elegant paper. I think he was conservative in his statements as to which course you are going to pursue being a matter of your own judgment. I think every man that comes to you with a duodenal or gastric ulcer should have the benefit of medicinal treatment with proper diet, and if he isn't better in the course of eight or twelve months, it is getting time then that you are going to have to do some surgery.

DR. R. H. T. MANN, Texarkana: The doctor accused me of attributing everything to foci of infection. I don't think we knew very much about diet until ten years ago and we are just beginning to learn. A man is a funny kind of animal and the doctor is just as funny. He is careful what he pours down his automobile, but he pours anything on earth down himself.

DR. HUNDLING, in response: I did not have time to consider the question of the bleeding ulcer. That is one of the most difficult type of lesions we have to deal with because even in cases where the duodenal ulcer has been excised probably five per cent of the cases will have trouble later. This may be due to a reactivation of the old ulcer or, of course, it may be due to the formation of a gastrojejunal ulcer. Occasionally the bleeding is due to disease outside of the stomach or the intestinal tract; sometimes a diseased gall-bladder or a diseased appendix may be responsible for a very severe hemorrhage.

MUCUS COLITIS*

H. E. MURRY, M. D., Texarkana

In presenting this more or less text book article, I have nothing new in the way of treatment to offer, but have in mind to review and call your attention to the disease which is responsible for as much or more human misery both mental and physical, than any other ailment. The disease which called forth from one Philadelphia colleague the following "dogmatism," "The prognosis is hopeless, the treatment nil, and the sole prophylaxis would have been to sterilize his grandfather." Mucus

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Colitis is a malady about the character of which there is much difference of opinion, and about the ethnology of which there is no agreement. It is defined as merely a chronic condition in which the bowels form abnormal mucus in large quantities. Not in all cases, but in severe ones it is accompanied by intestinal toxemia, and various nervous and psychic phenomenon; and to these the difficulties of its proper comprehension may be largely attributed. Constipation is usually present, however, it may exist with a diarrhoea. Abdominal pains of colicky nature, and severe colic is present at times, but not always. The sexes are about equally affected, and all ages; and although a common cause of invalidism, would seem to be frequently over-looked.

Diagnosis—(1) The patient's history of passing slimy stools or the characteristic thick, very tenacious plaques, sheets, scablike membranes, strips or ropes of mucus, which the observed patients commonly do not mention unless questioned. (2) The finding of the characteristic mucus in the submitted stool. (3) Bringing in by the patient strings of mucus, often in the belief that they are worms. (4) Detection of the characteristic mucus after colon irrigation or enema or even after a test dose of castor oil. (5) Least important, the observation through the sigmoidoscope of a dry granular mucus membrane in the upper rectum to which are clinging the thick tenacious pieces of mucus. It is to be borne in mind that mucus is the normal secretion of any mucus membrane, and therefore a little mucus clinging to the constipated stool, or a fair amount of evidently freshly secreted mucus, following a cathartic or obtained by enema or irrigation, does not establish the diagnosis.

Abdominal pain or discomfort, persistent constipation, occasionally diarrhoea, persistent headaches, and lack of physical and mental energy are more often the occasion for the patient to seek aid than the colitis. The majority of cases will be missed, if mucus colitis is sought for only when there is colic; if it is sought for in every patient with persistent lassitude, persistent headache or psychomurosis, it will often be discovered.

Pathology—The changes in pathology are not consistent, occasionally it is very slight, but in some colons removed at operation the mucus membrane of the cecum and ascending colon has revealed extensive areas of inflammation, and the whole wall of this part of the

intestine has shown atony, dilatation, and poor nutrition. These changes may also be seen in the lower illum, a region which Herter showed to be not infrequently the site of putrefaction. Evidence that mucus colitis is not purely a colon disease, is the report of a case from which the colon was removed by Sir Arbuthnot Lane, and who has symptoms of mucus colitis even to the colic and passing of strings of mucus 18 inches long.

Bacteriology—While bacteria is regarded as important in the etiology, yet no particular flora has been isolated and identified as a causative agent. Vaccines have been used, both stock and antigenous, without specific benefits.

Symptoms—Blood is found only occasionally in the stool and is usually accounted for by hemorrhoid. Should it persist in the bowel above the anus, cancer should be suspected.

Fever—Is rarely present and due to the reduced vitality, subnormal temperature is more the rule. Should fever be present superimposed infection in the bowel may be present or distant foci may be discovered.

Abdominal Pain—Is present in most cases at some period of the disease, ranging from a little soreness to paroxysms of severe colic. A large proportion of the patients never have colic, but it is not uncommon to find the intestine in an irritable state, so that moderate cramps are easily produced by purgative drugs. They feel pain keenly and persistent, localized, apparently very acute pain has caused many futile operations for cholecystitis, appendicitis, and pelvic trouble.

Intestinal Toxemia—The headaches, neurotic manifestations, and the condition of mental and physical fatigability may in many instances be associated directly with the chronic toxemia caused by the absorption of food or bacterial poisons formed in the bowel; or possibly of the dead bacteria themselves. It is probable that not only the abnormal bowel condition of the mucus colitis favors bacterial proteolysis—but also, that the injured mucus membrane permits unusual absorption of the deleterious material. This toxemia is generally of the putrefactive variety frequently recognized in the stools or irrigation returns by an odor suggesting something dead or fetid. When the dirty grayish brown or blackish membranes and strings of mucus with an albuminous, rotten, or dead fish odor obtained by colon irrigation—it is no wonder that these

patients give evidence of being poisoned. In some cases the stool is of the saccharobutyric fermenting type with a sour or pickle like odor in which event there may be uncomfortable flatulence, but very little toxicity. If the stools when passed or the irrigation returns smell of the cesspool or of vinegar pickles there is something decidedly wrong.

Nervous and Psychic Manifestations—Many of these patients have a variety of nervous symptoms ranging from simple introspective suggestibility to severe nervous breakdown, or display such mental instability of the "relative depressive" type as to suggest the borderline of insanity. A striking characteristic of the disease is mental and physical fatigability. The patients being readily brought to state of exhaustion by serious reading, by visitors, by responsibility or by physical exertion. In fact they may feel fatigued even though they do nothing. Lack of complete rest at night, to replenish exhausted nerve forces, the restless and dream disturbed sleep, accounts for this in part. Acute infectious conditions such as influenza may precipitate an attack of colitis already threatening. Social affairs, business worries and domestic difficulties, will frequently cause exacerbation of the disease. It is characteristic that these patients feel pain keenly, exaggerate all symptoms, and in their daily affairs regularly make mountains of mole hills. Psychoneurosis should be treated as such, but underlying bowel conditions of this type should not be neglected.

Consider the relation of the bowel trouble to the nervous system. Among neurologists it is customary to consider that neurasthenia or a psychoneurosis requires two conditions for its production; namely, underlying mental deficiency and a provocative factor, one of the most pronounced of which is fatigue. Yet perhaps the underlying mental deficiency is not such an absolute requirement, for Fore states that "fatigue often provokes ideas of negation, persecution, and disparagement," and Dubois states that "exaggerated fatigue may induce neurasthenic states in the best balanced individual." Therefore, without discussing the theory that a mental deficiency or unbalance belongs to mucus colitis, but agreeing that fatigue is a great provocative factor in psychoneurosis. It is the opinion that mucus colitis acts as such a provocative factor because it is an important producer of fatigue, either of itself

or through the production of toxic substances.

So if mucus colitis may induce fatigue or fatigability, likewise, may fatigue from other causes increase the colitis and its associated symptoms. One theory is that mucus colitis is a vagotonic disease and therefore curable by atropin. Other reports, after careful investigation, have found no real benefits from its use, possibly, excepting that of reducing the tendency to cramp. Atropin is regarded as the drug par excellence in relieving colic and tendency to cramp whether mucus colitis be present or not.

Complications—Mucus colitis is at times an accompaniment of surgical conditions that will render all medical treatment futile. Such as purulent tonsils, diseased gall-bladder or appendix, an anal fistula, a retroverted uterus, or torn or lax perineum. It is also a manifestation in cancer of the bowel, hyperplastic tuberculosis of the bowel, polyposis, diverticulitis, chronic amebiasis, and chronic dysenteries in general. Other infections are pyorrhoea alveolaris, accessory nasal sinus infections, and those of the pelvis. Patients with severe mucus colitis do not stand surgery well, and before one submits them to such, attempt should be made to get them in as good general condition as possible. Too often they have had already sundry gynecological and abdominal operations which have left them in a worse state than before.

Treatment—Mucus colitis is chronic, is a cause of ill health, and has no specific treatment; therefore, its therapeutics strikingly illustrates the principle of treating the patient, the whole patient rather than just a disease. The cure requires a very long time and relapses are common. A year or more is not a long time to affect a cure, and the patient must be warned of this fact. In any case, every factor that may contribute to fatigue or lower vitality must be combatted. Infected nasal sinuses should be treated, purulent tonsils removed, flabby abdomen supported by a belt, or a uterine retroversion corrected. The aim should be to give a wholesome mixed diet, but at the outset it must be bland type, excluding such gastro-intestinal irritants as wholewheat bread, fruits, salads, coarse vegetables, coffee, tea, and alcohol. If necessary, the diet must be modified to suit conditions in the stomach such as hyperacidity, achylia, and atony. Theoretically, the bland diet may be constipating, but the course, undigestible, irritating foods that

constitute roughage will do more harm to these injured colons than any mild laxative drug. Restricted diets must be watched closely, and later there may be a gradual transition to coarser type, with sufficient vegetables, salads, and fruits. It must be remembered that a vital element in creating appetite and producing bowel movements is vitamin "B." in all cases the diet should be ample for these patients are prone to under eat because of fear that this or that or the other food will be harmful, and so long as under eating is continued, cathartics will have to be continued. The patients are ripe subjects for food fads and various cult treatments. In cases where lack of appetite is reason for not eating, appropriate bitters should be given, and as palatable a diet as possible arranged.

If intestinal putrefactive toxemia is persistent, it may require, for a time, the complete abolition from the diet of the putrefactive foods, as fresh eggs, peas, beans. Experience suggests that chicken is more putrefactive than the other plain meat foods, and peas and beans are more putrefactive dried than green. If milk is well taken, large amounts should be given occasionally, a strict milk diet will be well borne for a short time. Fresh, not pasteurized milk, should be taken. If fresh milk is not well taken, certain dried milks or malted milks or the acid milks may be given, though it is questionable whether any specific virtues are to be had because of the particular sour milk germs they contain. In cases of achylia the acid milks are usually well borne; with hyperacidity they are contraindicated. After the return to meat and eggs in the diet it is a good plan to have a lacto-farinaceous day once or twice a week, a day when the diet is confined to such as milk, cereal, bread, potatoes, and fruit juices or jellies.

Occasionally when mucus and toxic accumulations are unusual, colon irrigations are given or a dose of castor oil. A change to small daily doses of magnesium sulphate or saline water will effectually clean out the mucus, but too many liquid stools should be avoided. These are temporary benefits, and purges should be avoided. Strong purges result in bowel exhaustion, and these patients too readily acquire the purge habit.

Colon irrigations are given once or twice a week or just occasionally, depending on the severity of the case. Several gallons of water (plain warm water) by the two tube process,

moving the patient from side to side, is the usual method. The bowels should be evacuated with an enema preceding the irrigations. It may be necessary on occasions to follow the irrigations at night with a laxative to completely eliminate the mucus which clings so tightly to the intestinal wall. Alvarez and Freedlander find that side tracking is a common trick of the intestine, attesting to the difficulty in reaching all parts of the lower bowel. They gave beads with foods to normal individuals and found that many days, even weeks elapsed before the last bead passed. One authority disapproves the use of medicated irrigations, nor is it regarded of value to introduce foreign germs. Irrigations have become a commercialized fad, and patients must be warned against their abuse. Too often use is harmful, and they should be as carefully supervised by the physicians as any other form of treatment. Excellent effects in the intractable cases may be obtained by the slow rectal injection at bed time—of from one-half to one pint of warm olive, cotton seed, or corn oil, to be retained all night.

Hemorrhoids and fissures or aggravating complications and favor constipation. The warm oil instillation or a five grain ethyl amino-benzoate suppository, inserted first thing in the morning, will be helpful in these cases. Mineral oil by mouth may be used to effectually soften the stool. Diet and many other factors enter into the treatment of chronic constipation, but space does not permit their consideration.

Psychosthenia—The psychoneurotic patient must be dealt with with the utmost kindness and consideration, but with firmness. These patients take everything seriously and dogmatic statements are often misconstrued, particularly, as regards various foods, remedial measures, or methods of rival physicians.

They must be instructed never to over do anything physically, mentally or emotionally to the point of fatigue; yet too much loafing must be avoided. In fact detailed instructions, usually in writing, I find the most satisfactory. Severe cases that require periods of rest may have a hot water bag, electric pad, or hot compress applied to abdomen during this time, change of environment, from home or business is often helpful. A great deal of water should be encouraged which is effectual in diluting toxins, and furnishing general hydrotherapy.

Hospital treatment is necessary in some severe cases where they are unable to carry out the routine, at least until they can be brought under management and taught the measures most beneficial. Cold spinal douches, cold rubbings on the spine, massage, hot applications, may be carried out as well as other physical therapeutics and care of diet, and bowels, and rest. Relaxation before returning home is to be aimed at.

Bromides instead of phenobarbetol drugs are much more advantageous for the nervousness or insomnia. Strychnin is usually contraindicated as the patients are already in a state of overtone.

Conclusion—In a large number of these cases of mucus colitis a practical cure is possible, but usually only after persistent treatment for a long time. The nervous phenomena usually responds with the improved bowel condition. The bowel condition often persists and must be treated a long time after the nervous and toxic symptoms subside.

Many of the psychoneurotic patients with mucus colitis are misfits, or victims of circumstances, or of misdirected ambition. Yet a great deal can be done to increase their usefulness to themselves and others. They come to us with their complaints because we are physicians, but with such patients our familiarity with the materia medica, or our skill with knives or other instruments will be of little avail unless we are possessed also of human understanding and sympathy.

SEPTIC SORE THROAT

According to David J. Davis, Chicago (Journal A. M. A., Sept. 28, 1929) the present status of the epidemiology of septic sore throat is much the same as it was twenty years ago. Outbreaks are rare. They occur here and there and probably will continue to do so. No doubt, epidemics are not being observed that years ago would not have been recognized. Modern methods of pasteurization and the careful supervision of certified milk products, together with new methods of identifying *Streptococcus epidemicus* should do, and possibly have al-

ready done, much to prevent epidemics. Much still remains to be done, however, in the control of milk supplies before the disease can be completely eradicated. *Streptococcus epidemicus* seems to be the specific cause of the disease and is so regarded by those who have most carefully studied it. Studies of the more recent epidemics by various workers indicate that the usual if not the only route of transmission of the streptococci is from a human being to the teat and udder of a cow, through contact. Here they incubate and rapidly multiply. They then pass out in the milk directly to the throat of the consumer. Strains of *streptococcus epidemicus* yield a specific soluble toxin which varies to some degree from the toxin of the scarlet fever streptococcus.

VALUE OF X-RAY LIES IN SKILLED INTERPRETATION

X-ray examination is one of the most important procedures used in modern medicine, but it is one of the most mysterious to the patient in most cases. Dr. C. Wadsworth Schwartz explains in the May issue of *Hygeia* how a physician uses the x-ray.

The x-ray does not produce a photograph, but merely shadowgraphs. These are not an open book for any one to read. It is only by the most careful study by one who knows what he is looking at that information of value can be obtained. As the x-ray specialist becomes more and more familiar with the structures of the body and their movements, he can identify them more easily. The story is only beginning then, however, for abnormalities in the recognized shadows must be noted and interpreted in terms of disease.

Many persons are not entirely clear on what the x-ray is. It is a form of light of short wave length, so short that the eye is unable to detect it, Dr. Schwartz explains. The ray itself is not electrical, but it is produced electrically. It was discovered by Wilhelm Konrad Roentgen of Germany in 1895. He called it the x-ray because its nature was a complete mystery until quite recently. Radiologists are now making an effort to change the name to roentgen ray, in honor of the discoverer.

THE JOURNAL

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Abstract

RELATION OF PHYSIOLOGY TO CLINICAL MEDICINE

Physiology is the keystone in the arch of medical and surgical knowledge, asserts Maurice H. Rees, Denver (Journal A. M. A., Sept. 7, 1929). On its security depends the security of the superstructure of medicine as a science. Physiology is primarily a study of life. Human physiology is therefore a study of human life. Physiology must be studied on living organisms, or on living parts of the organism. A knowledge of the subject is based on experiments that can be performed on man or on animals showing functions resembling those of man. The human animal should be used so far as possible in the training of medical students. Probably in no other science does the student encounter as many theories as are found in physiology. These theories represents gaps in our knowledge which must be filled in by patient research. It is therefore highly important that every physiologist must be an investigator. Physiology cannot be properly taught as a series of essentially unconnected facts. Coordination and co-operation are major principles in the proper functioning of any organism just as they are in any complicated and smoothly working machine. If one is to gain a thorough understanding of the organisms or the machine one must thoroughly understand the interrelations of all its parts. It may be a mistake to permit students to purchase a textbook. A teacher with a broad and thorough knowledge of the subject might be able to give a clearer picture and bring about a better coordination of the subject. The teaching of physiology should not be limited to the brief course given in the first or second year. Throughout his medical course, the medical student should be made conscious of the fact that he is constantly dealing with physiologic principles. It should be the duty of every clinical teacher to impress on his students the need of daily application of their knowledge of physiology to their clinical problems. When this is done, clinical medicine will become more definitely the sciences of medicine. There is too much of a tendency on the part of the teachers of laboratory sciences to hold themselves apart from clinical medicine. The teachers in the first two years should be on the staff of the teaching hospital and should take

an active part in the staff meetings and in consultations in the hospital. The laboratory man should not be considered a mere technician. Every teaching hospital should furnish facilities for clinical research, preferably in close co-operation with the laboratory departments. The clinician should be encouraged to devote a large portion of his investigation to the living organism rather than merely to satisfying his curiosity in the autopsy room. A more careful study and application of physiology would illuminate many of the dark corners of clinical medicine. The progress of physiology goes hand in and with the development of clinical medicine and there is a mutual interdependence. The experimental method is used jointly by the modern physiologist and the modern clinician, and in the use of this method the clinician becomes a physiologist. Physiology is not a stepping stone to clinical medicine. It is clinical medicine.

Personal and News Items

Dr. J. P. Sheriff of Pine Bluff was a recent visitor in Little Rock.

Dr. S. J. Hesterly of Prescott has returned from a recent visit to New Orleans.

We regret to announce the death, September 25, of Mrs. Leota Troxell Henderson, wife of Dr. G. L. Henderson of Conway.

Dr. and Mrs. H. T. Smith of McGehee have returned from an extended motor trip in the North and East.

Dr. and Mrs. H. A. Dishongh of Little Rock have returned from a motor trip in the North and East.

Dr. and Mrs. John L. T. Sneed of Oklahoma City announce the marriage, September 18, of their daughter, Majorie, to Dr. Charles R. Moon of Little Rock.

Dr. J. A. Hipp of Olney Springs, Colorado, has moved to Little Rock. Dr. Hipp is a former resident of Arkansas, having lived in Baxter County until ten years ago.

The annual convention of the 10th district and Sebastian County Medical Society was held September 17. Addresses were made by Dr. J. Hoy Sanford, St. Louis, Dr. W. K. West, Oklahoma City and Dr. W. E. Lunsford Poteau, Oklahoma. Dr. W. E. Sanders of Memphis spoke at the banquet in the evening.

Dr. John L. Jelks of Memphis, Tenn., announces the association with him of Dr. Charles C. King. Practice limited to abdominal surgery and procto-enterology. (In last month's Journal we erroneously gave Dr. Jelks' address as Hot Springs instead of Memphis.)

Contract was let recently for the construction of a 30-room hospital at Monticello. The building will be located on North Main Street and will cost slightly more than \$50,000.00. A corporation has been formed of which Dr. J. S. Wilson of Lake Village is president, Jack Curry, Monticello, vice-president, and Dr. Stanley M. Gates, Monticello, secretary and treasurer.

The fifty-first fall term of the Medical School, University of Arkansas, opened Wednesday, September 18, with the largest freshman class in the history of the institution. Sixty students were registered for the class. The total enrollment for the term is 160.

Included in the the freshman class are two young women and one Japanese.

Dr. Vinsonhaler, dean, said that all classes reported increases and several states are represented.

On account of the other members of the Cancer Control Committee of the Arkansas Medical Society living outside of Little Rock, the Chairman of the Committee, Dr. Dewell Gann, Jr., has joined the activities for a Statewide campaign, to be conducted October 21-26, with the work of the State Committee of the American Society for the Control of Cancer, of which Dr. Gann is also Chairman and Dr. S. F. Hoge, Secretary.

These Committees jointly, during the past year, have put on sixteen radio talks, made as many County Medical Society meetings as have requested their presence, conducted Cancer clinics and demonstrations, both at State and County Fairs. Some twelve or fifteen

Little Rock physicians and surgeons have joined the committees in their activities, and Cancer week this year will see the greatest organized effort to teach the people the importance of the early recognition of cancer and its proper treatment the State has ever witnessed.

MIAMI, NOVEMBER 19-22, 1929

The programs for general, clinical and section meetings of the twenty-third meeting of the Southern Medical Association are being rapidly completed. They will stress the things which every physician needs to know every day, the small things and large things which help reduce the duration and intensity of illness. Tuesday, November 19, will be an unofficial day, a pre-meeting clinical day, with a splendid program by members of the Miami profession. On Wednesday, November 20, the general clinical program will begin, and the address of the President, Dr. Thomas W. Moore, of Huntington, West Virginia, will be heard that evening.

On Thursday and Friday, November 21 and 22, the sections will meet in half-day sessions. The programs contain the names of leaders in their various lines of work, not only from the Southern and Northern United States, but from Canada and Cuba. The American Society of Tropical Medicine is meeting this year con-jointly with the Southern Medical Association. Florida should furnish clinical material particularly suitable for study by this Society. The Southern Association of Anesthetists meets, as usual, conjointly with the Southern Medical Association, and the Atlantic Coast Line Surgeons' Association will merge its annual meeting into the Section on Railway Surgery of the Southern Medical Association.

PRESIDENTS' NIGHT

Wednesday evening will be "Presidents' Night," when the presidents of three medical organizations will be heard: the President of the Southern Medical Association, Dr. Moore; the President-Elect of the American Medical Association, Dr. William Gerry Morgan, of Washington, D. C.; and the President of the Circulo Medico de Cuba and Secretary of Sanitation of the Republic of Cuba, Dr. Francisco M. Fernandez. Dr. Fernandez is a member of the cabinet of the President of Cuba,

and is head of all public health work in the Island of Cuba, where splendid work is being done under his direction. The Association is greatly honored by having him attend the Miami meeting and deliver this address.

There will be a public address Tuesday evening, and the Orations on Medicine and Surgery will be given on Thursday evening.

Miami is a fisherman's paradise and the best game fishing available to Americans is off its coast. The balmy weather of November will permit surf bathing and all forms of water sports. There is also good hunting in the vicinity.

TRAVELING ARRANGEMENTS

Through sleepers with reduced railroad rates are available from all points in the South to Miami. A special train, the "President's Special," has been announced. Details may be found on page 34. Florida's splendid hard-surfaced roads make a trip by automobile easy, and Florida can be seen at its best by automobile. A tour from New Orleans to Miami is being arranged, which will go by steamer from New Orleans to Tampa, and from Tampa to Miami by bus. The Medical Association of Georgia, of which Dr. William R. Dancy, of Savannah, is President, is featuring a "President's Tour," a motortrade from Savannah to Miami, and physicians from other States are invited to join it.

Those who motor will see the most beautiful parts of Florida. They should make every effort to go through the Ridge Section, and to see the Bok Memorial Tower and Sanctuary at Lake Wales, in the heart of the ridge section. The Bok Tower, on the highest point in Florida is worth driving many miles to see. It is especially lovely when its marvelous chimes are playing.

HOTELS

Miami is noted for its beautiful and commodious hotels. Five of the largest and finest are close together on Biscayne Boulevard, across from the city park, overlooking Biscayne Bay and the Atlantic Ocean. Guaranteed rates are \$3.00 to \$5.00 per day for single rooms and \$5.00 to \$8.00 for double rooms. See page 950 for detailed hotel information.

CUBA

"After Miami, Cuba." To climax an already delightful occasion the Association has arranged an official all-expense post-conven-

tion tour to Cuba under the direction of the Secretary-Manager. Few will again have this propitious opportunity to see Havana and Cuba at so low a cost under such delightful circumstances. Those who visit Cuba are invited by Dr. Fernandex, Secretary of Sanitation, to be his guests for a luncheon in Havana. See page 947 for full details and program of the tour.

Miami and Florida never lose their charm. "There is no place in the world that compares with Miami as a resort center," says a retired business man of Chicago.

The great interest of medicine lies in its ever changing character; the physician can never handle his cases perfectly, but he can each year estimate what his fellow practitioners have evolved, which will improve his own methods of practice—Southern Med. Journal.

NEW AND NON-OFFICIAL REMEDIES

Viosterol—Investigators discovered that ergosterol when subjected to ultraviolet radiation, develops an antirachitic (vitamin D) potency enormously greater than that of cod liver oil. For therapeutic use the ergosterol after irradiation is usually dissolved in a vegetable oil. The Council on Pharmacy and Chemistry has adopted the term viosterol to designate irradiated ergosterol, and viosterol in oil to designate a preparation containing this substance dissolved in oil. The Council has also provisionally adopted the qualifying phrases 100 D, 5 D, etc., to designate the vitamin D potency of the various preparations as multiples of the vitamin D potency of good cod liver oil. Viosterol is for use in prophylaxis and treatment of rickets and, experimentally, in other conditions arising from faulty calcium and phosphorus assimilation. It should be borne in mind that viosterol does not contain vitamin A and that harm from hypercalcemia may result from the use of too large doses.

Viosterol in Oil 100 D.—Viosterol dissolved in a vegetable oil and standardized to contain 1,333 rat units of vitamin D in each Gm., this strength being 100 times that of a potent cod liver oil used as a standard. The daily prophylactic dose for the average infant and child is 8 to 10 drops (0.1233 to 0.1666 cc.; 2 2-3 to 3 1-3 minims). The marketed preparations are accompanied by a dropper designed to deliver 3 drops to the minim.

Viosterol-Abbott—A brand of viosterol in oil 100 D, N. N. R. Abbott Laboratories, North Chicago, Ill.

Parke, Davis & Co.'s Viosterol—A brand of viosterol in oil 100 D, N. N. R. Parke, Davis & Co., Detroit.

Viosterol-Squibb—A brand of viosterol in Oil 100 D, N. N. R. E. R. Squibb & Sons, New York.

Cod Liver Oil with Viosterol 5 D—Viosterol dissolved in cod liver oil, the solution containing not less than 400 vitamin A units per Gm. when tested by the pharmacopeial method and 66.65 rat units of vitamin D Per Gm., this antirachitic strength being five times that of a potent cod liver oil used as a standard. This product is proposed for use in conditions in which it is desired to supplement the administration of vitamin A with that of vitamin D. For infants and young children the dose is 2.5 to 3.3 cc. (53 to 67 minims) daily.

Abbott's Viosterol Cod Liver Oil—A brand of cod liver oil with viosterol 5 D, N. N. R. Abbott Laboratories, North Chicago, Ill.

Squibb's Viosterol Cod Liver Oil 5 D.—A brand of cod liver oil with viosterol 5 D. N. N. R. E. R. Squibb & Sons, New York.

Squibb's Viosterol Cod Liver Oil 5 D Mint Flavored—A brand of cod liver oil with viosterol 5 D, N. N. R. containing 0.67 per cent of oil of spearmint as flavoring. E. R. Squibb & Sons, New York (Jour. A. M. A., August 31, 1929, p. 693).

Obituary

HYNES, GEORGE FRANKLIN—Dr. George F. Hynes of Fort Smith died September 17, 1929. Aged 82. He was killed when he lurched against a moving trolley car in an effort to avoid an automobile while crossing a street. He was an honorary member of the Arkansas Medical Society.

Dr. Hynes is survived by his widow; one daughter, Miss Mary R. Hynes of Fort Smith; a son, Dr. P. Hynes of Evanston, Illinois, and a sister, Miss Augusta Hynes of Winnipeg, Canada.

County Societies

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society met in regular monthly session Thursday night, September 5th, at the Camden Country Club as guests of Dr. R. B. Robins of Camden. The meeting opened with a banquet and musical entertainment by Misses Evelyn Leggett and Lucille Smith of Camden.

Present: Rhinchart, Early, Powell, Jameson, McGill, Robins, Worthington and Hollingsworth of Camden; Purifoy and Rushing of Chidester; Sam Thompson of Stephens; Smythe, Thompson and Kennerly of Bearden; Rhine of Thornton; Plunkett of Elliott; Newsom of Louann; Hathcock of Locust Bayou; Cathey and Murphy of El Dorado; James of Holly Springs; Ritchie of Ogemaw; March of Fordyce and Clements of Mount Holly. Visitors were: Drs. A. C. Kirby and Joe Sanderlin of Little Rock; Rev. Roberts of Louann, and Misses Evelyn Leggett and Lucille Smith of Camden.

After the banquet, the following scientific program was rendered:

"Chronic Endocervicitis" by Dr. Joe Sanderlin, Little Rock.

"Diarrheas in Children" by Dr. A. C. Kirby, Little Rock.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The Lawrence County Medical Society met in regular session at the Walnut Ridge Country Club, September 10, 3:00 p. m. The doctors' wives were guests of the Society.

In attendance were physicians from Memphis, Marked Tree, Tyronza, Harrisburg, Brookland, Paragould, Pocahontas and Manson.

The following program was rendered:

"Typhoid Fever" by Dr. Hatcher.

"Distinguishing Appendicitis from Appendiceal Allergy" by Dr. McIntosh.

At the conclusion of the scientific program a fish dinner was served at the Club.

The October meeting is to be held in Walnut Ridge.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The members of the Mississippi County Medical Society were entertained with a "fish fry" served on the banks of the "Broad Mississippi" at Barfield, by Dr. W. M. Owen of Armorel, Tuesday, September 25.

Later in the evening a business meeting was held in the Armorel Hotel.

Those in attendance were: Dr. W. P. Hutchins, Dr. and Mrs. V. R. Fox, Dr. W. D. McCall and Family, Dr. E. V. Hill and family, Dr. A. M. Washburn and family, Dr. and Mrs. P. L. Tipton, Dr. and Mrs. J. R. McDaniel, Dr. W. M. Owen, Dr. C. E. Wilson, Dr. and Mrs. M. O. Usrey, Dr. J. A. Saliba, and Dr. and Mrs. F. D. Smith.

CRAIGHEAD-POINSETT

(Reported by THAD COTHERN, Sec.)

The Craighead-Poinsett Medical Society met October 3, 1929, in the dining room of the Hotel Noble, Jonesboro. The attendance was good, the dinner excellent, and a spirit of co-operation and fellowship was very evident.

On account of an emergency case, the essayist for the scientific paper was unavoidably absent. The next matter taken up was the economic phase of the profession. Mr. M. P. Welsh was the guest for the evening and read a very able paper on the "Economic and Co-operative Phase of the Physicians' Work." The paper was to the point and full of so many helpful facts and suggestions that a motion was made and unanimously carried that it be embodied in the minutes of the meeting. As a mark of appreciation, Mr. Welsh was elected an honorary member of the Society. His paper follows:

Mr. Chairman and Gentlemen of Craighead Poinsett Medical Society:

The thought that has been most on my mind since receiving the request from your Secretary to meet with you here this evening is, whether I will be permitted to pass from this your meeting place in possession of all parts of my anatomy fully intact as you now see me. Also, that you will assure me that you will not appoint a commissioner from your rank to inquire into my mental condition for undertaking to advise with you on the problems of your profession.

I have given some study, since receiving an invitation from your President and Secretary,

on the subject, "HOW CAN WE BEST EDUCATE OUR CLIENTS TO PAY THEIR ACCOUNTS."

I would say from my personal experiences with those of you, whom I have come in contact with, that I have found you to be a pretty efficient set of collectors. I can realize, though, that your profession has a great handicap to offer the people compared to other vocations, for the reason that you are the repair man for the human machine, for it's your humane duty to treat the human machine for its needs, regardless of character, color or race, whether rich or poor, it is your duty to administer this service as you have accepted this profession for the sole purpose of relieving suffering humanity.

Your collecting problems are with the class of people, who are able to pay, but will not, and those who will shift from one doctor to another to keep from paying, and those who are poor will pay, but are awfully slow. I realize that each of you want to reserve your patients and may have some hesitancy in giving their names to your competitor, thinking perhaps, in time they will pay. At the same time that patient may be doing the same trick to your competitor.

Conditions have a great lot to do with the problems of credit, and wise judgment should be used in giving information that might injure the reputation of the creditor.

"The Importance of Co-operation Among Credit Grantors."

The credit end of your association can mean only one thing. A free exchange of credit information, one member giving the other all information he possesses about any of their patients, even among you who are most experienced in giving credits. There is not always the fullest conception of the benefit that can, and should be accomplished through a free exchange of experiences. Through this experience you will be able to educate those creditors who are not meeting their obligations promptly, to the point where they will realize that if they expect your service, they must play the game square and meet these obligations when due.

The members who refuse to co-operate by furnishing the fullest possible information on any client, are not living up to the rules of your Association, therefore retards the pro-

gress toward a higher desirable end, and he also misses a chance to strengthen a service of which he may, at a later date, find pressing need to avail himself of.

The fullest co-operation is only possible when all eligible members are included in its membership, and when every one becomes a member, not only for the information he can get, but for the information he can give. The work of an organization of this kind will do more to prevent a "poor risk" from assuring accommodations than all the laws that are founded by Legislatures.

All over this country the professional men are organizing in their different occupations for their own mutual interest. Old jealousies are being eliminated and the "Help One Another" spirit is apparent among them.

Your professional experience has taught you that clothes does not make the man, and that the ownership of property, or social standing, does not always imply honesty and integrity.

As business and professional men you should intrust to each other that information you would like to receive yourself. The more frequently you meet and discuss your business problems the better acquainted you get and the freer you discuss your knotty problems. Round table talks on your business experience will do more to build your profession socially and financially than any laws you try to impose on your members. Associations have proven to me to be the balance wheel for the up-building of industry, through it you clarify many problems the individual concern cannot. The exchange of information through correspondence and personal contact helps to round out many difficulties that tend to stifle progress and puts your business on a high constructive basis, instead of a low destructive basis when the individual plays the game single handed.

There is no wiping it out that "in union there is strength," therefore I believe you can solve these different problems of your profession by forming yourselves into an association which will be the means by proper support of its members of putting it on the high standard of efficiency you would like.

A round table talk, stressing certain features of Mr. Welsh's paper, was had. The activities of the Doctors Business and Credit Rating Bureau was also discussed. Representatives from the Bureau of Paragould, Harrisburg, Marked

Tree, Marmaduke, Trumann and Tyronza were present, and assured the Society of the hearty co-operation of the Bureau at these various points.

The Secretary of the First Councilor District and Northeast Arkansas Medical Society was present and stated that the program for the fall meeting which will be held at Harrisburg, October 17, was completed.

COUNTY SOCIETY MEETINGS

The general let-up in the activities of the medical societies incident to the summer season has come to a close, and the usual stride has again been resumed in medical circles.

The success of the county society meeting depends largely on the type of program presented. In these days when the county society is meeting with competition from various sources, hospital staff meetings in particular, it behooves the program committee of the society, which in most instances consists of the county society secretary, to show added zest in arranging first class scientific programs. Competition should act as a stimulus here as it does elsewhere. We know of one secretary who at the beginning of the year called on certain members for participation in the program on certain dates, with marked success. Full programs are more likely to be obtained through this method than by waiting for volunteers. The secretary of the State Medical Association may be called upon to assist in obtaining outside talent to add to the interest of the county meetings.

With added interest in economic questions some secretaries have held a medical economics meeting during the year to which local physicians outside of the society membership as well as members were invited. This has been in a number of instances the means of adding desirable physicians to the society membership. State officers and committee members have shown in the past a remarkable willingness to attend these special meetings to discuss various economic questions.

The county society means most to the individual members who put something into the society by attendance and participation in the various activities of the society, scientific and otherwise.—Minnesota Medicine.

CUR, O MEDICI, CUR?

Scientific speculation—for, alas, I am thinking in terms of a bacteriologist—almost overcame dramatic appreciation, and I wondered regarding the number of bacteria which the surgeon had added to my white kid oxfords, to say nothing of the red polka dots which suddenly became visible on my hose, as a sponge, soaked in blood, missed the receptacle for which it was intended. Why, Oh doctors, why are you so careless?

At the beginning of the sixteenth century, some four hundred years ago, medicine and pharmacy were stretching themselves prodigiously and just awakening from a hibernation of centuries. It was a period when the strangest superstitions were still generally accepted in medical treatment alongside of the beginnings of a better understanding of anatomy and of the therapeutic value of many plants. Medical schools were well-attended and work already done on the cadaver. In the "Tsagage," the most widely circulated compendium of anatomy attributed to the school of Manteagua, about 1530, we find wood cuts of surgical operations which are the very embodiment of neatness and order. Dr. Howard W. Haggard in "Devils, Drugs and Doctors" has included numbers of illustrations of surgical operations performed by the Egyptians, and even these quaint old etchings and engravings do not show floors which are littered with misdirected sponges and cotton. Yes, Cur, Oh Medici, Cur, do you expect your assistants to accomplish the impossible? Out of chaos we are expected to arrange the operating room, as neatly as the proverbial pin, in one minute's time while our pedal extremities continue to wear the bacteria—say "germs" if you prefer—thrust upon them by you, oh, careless surgeon. We implore you to co-operate with us so that the Stars and Stripes may wave over immaculately kept floors and the American Eagle will scream with delight to see the most sanitary conditions imaginable. From a professional standpoint, we pride ourselves in the glory of past triumphs and are ambitious to win fresh laurels.

"We have four miles of beds, not eighteen inches apart," wrote Florence Nightingale from the base hospitals of the Crimean War in 1855. "Tomorrow five hundred more wounded men are due, and no blankets, sheets or bandages!" Before many weeks, this reso-

lute, grey-eyed girl and her little band of volunteers—the first modern trained nurses—brought order out of chaos. Recoveries among sick and wounded soldiers rose steadily from fifty-eight to ninety-seven out of every one hundred! The busy surgeons had to work quickly, of course, but we have no record of floors strewn with soiled bandages and sponges and the feet of the assistants being soaked in blood, iodine or argentum nitritis.

In the World War of 1914-18 desperate calls for “more nurses!” brought increasing thousands of women into scenes of horror and suffering, and their heroism is a vivid memory to the men whose lives they helped save.

Today, in the United States alone, a quarter of a million registered nurses stand ready night and day to respond to the physician's need for expert care of the sick. The nurse's professional attitude is impersonal, scientific, Yet, her hand smoothes the pillow under childish curls, or curtains the light from feverish eyes with a sympathy only a woman can give. In the scientific training of nurses, there is never-ending insistence upon absolute accuracy in the administering of medicines prescribed by the physician. In the scientific training of surgeons are they not taught absolute accuracy in tossing swabs into the receptacle?

No story in the world could be more interesting than the age-long struggle of physicians and surgeons against suffering and disease. It is a pathetic fact that there are few today who realize the magnitude of the horrors from which science and the courageous efforts of medical men have gradually released the human race. However, since the earliest time until the present day, human beings, threatened with moral or material evils, whether imaginary or real, have always in their afflictions instinctively appealed to the doctors, as arbiters of their destinies. The story of the heart is that of the main-spring of life—is the sealed motor of the human machine, practically inaccessible or visible. We may be able to slow or accelerate its actions, strengthen its musculature, or relieve its burden, but to fathom its mysteries meets with impenetrable obstacles. And it still remains a mystery why

so many sponges and applicators, hurled in the direction of the receptacle for waste, miss their destination. We cannot account for their detours, but surgeons, we are for you one hundred per cent strong, and we agree with Ida Norton Munsen, in

“THE SURGEON'S HANDS”

His face, I know not whether it be fair
Or lined and grayed to mark the slipping
years,
His eyes, I do not glimpse the pity there.
Or try to probe their depths for hopes or fears.
Only upon his wondrous hands I gaze.
And search my memory through so fittingly
To voice their loveliness, In still amaze
I bow before their quiet dignity.
They make the crooked straight and heal old
sores,
The blind to see, the war torn clean and whole.
Throughout the suffering world they touch the
doors
That open wide to life, the bitter bowl
Of pain they sweeten till the weary rest,
As though the hands of Christ had served and
blest.”

Please, oh surgeons and medical men, let us get a vision of “spotless feet” and clean floors in our hospitals and clinics during operations, both major and minor, because every great plan for human betterment originates in a dream. Ezekiel was not the first man who ever had a vision of hope that was eventually to revolutionize the world; nor was he the last. It is the one who can stick to an ordeal through a long period of time, fight on silently, deadily, determinedly, week after week, month after month, year after year, even when those nearest him have ceased to take interest in his conflict, who shows himself the hero. Yet, strange indeed, how the bumps of life often bump a man upward. “Flowers for the living!” you say. They are one of the very tangible compensations for our work, and one on which we do not have to pay income tax. We know the bacteria which light on the floor, and sometimes on our feet, are really the most polite and well-bred little germs in existence, but let us be careful, and again I repeat: “Cur, O Medici, Cur?”—Bess Hall, Stephens, Ark.

Book Reviews

American Illustrated Medical Dictionary.—A complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Medicine, Biology, Medical Biography, etc. By W. A. Newman Dorland, M. D. Member of the Committee on Nomenclature and Classifications, 107 of them in colors. Published by W. B. Saunders Company, Philadelphia, 1929. Flexible binding, Plain, \$7.00 net; Thumb Index, \$7.50 net.

This well-known dictionary is complete in every respect as to terms used in medicine. Many new illustrations have been added. One of the new features is the establishment of a definite standard in terminology, spelling, hyphenization, etc.

Preventive Medicine—By Mark F. Boyd, M. D., C. P. H., Member of Regular Field Staff, International Health Division of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Third Edition, Revised. Octavo volume of 475 pages with 151 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, \$4.50 net.

While admittedly brief, we believe this book represents the minimum knowledge of the subject which physicians should be expected to possess. Section one describes "Diseases Due to Invading Micro-organisms;" Section two, "Deficiency Diseases;" Section three, "Occupational Diseases;" Section four, "The Puerperal State;" Section five, Heredity and Disease;" Section six, "Special Aspects of Hygiene and Sanitation;" Section seven, "Demography;" Section eight, "Public Health."

Gynecology—By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Fourth Edition, Thoroughly Revised. Octavo volume of 1016 pages, with 562 illustrations, 128 in colors. Published by W. B. Saunders Company, Philadelphia. Cloth, \$10.50 net.

This fourth edition has been brought up-to-date and revised from cover to cover. It is an ideal textbook and general reference book on gynecology. Part one deals with the physiology and relationship of gynecology to the general organism. Part two is designed primarily for the undergraduate who is taking his initial course in gynecology. It refers particularly to gynecologic diseases. Part three is devoted exclusively to the technic of gynecologic surgery and is written to assist the advanced student and practitioner.

A Text-Book of Pharmacology and Therapeutics.—by Hugh Alister McGuigan, Ph. D., M. D., Professor of Pharmacology and Therapeutics, University of Illinois, College of Medicine. Illustrated. Published by W. B. Saunders Company, Philadelphia.

The author's aim in presenting this book is to give clearly the important facts of pharmacology. "Analysis of the action of drugs aids in the therapeutic application."

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SOME OBSERVATIONS IN THE TREATMENT OF GONORRHEA*

THOMAS N. BLACK, M. D., Hot Springs

The history of gonorrhea dates back to Biblical times. The book of Leviticus refers to an unclean discharge from the genitals of both men and women and in Second Samuel we find that the curse of God was visited upon the unrighteous Israelites in the form of a "pussy discharge." Thus, since the very beginning of civilization, gonorrhea has affected mankind and has spread to the four corners of the earth. Authorities would lead us to believe that in spite of our present knowledge of the disease, and in the face of a campaign of education toward venereal infection, gonorrhea is on the increase.

This unpleasant and loathsome¹ disease is directly responsible for an enormous economic loss to the world. Mortality statistics do not reveal many casualties due to this social enemy but this is indeed a fallacy. A search of hospital records and death certificates would show "pelvic infection" recorded as the cause of demise in literally thousands of cases. How many of these may be traced directly to the Neisserian organism? Gonorrheal endocarditis is frequent; gonorrheal arthritis totally incapacitates hundreds of people each year. Many other complications occur, causing misery and loss of usefulness. It would seem these facts, in this age of broad thinking and freedom of speech, would take the secrecy away from this grave enemy of the human race and force itself upon a broader public knowledge.

Two things are necessary to curb the spread of gonorrhea and until these are done, it is certain to continue in its increase. The first is public education. Upon this subject I shall

not dwell except to say that it should not be done in a whispering campaign, but rather in plain outspoken words. The second is essentially medical, a campaign to increase scientific knowledge among practitioners being imperative. In the light of our present knowledge of the disease the fact that it continues to spread brings a strong indictment against the profession.

I quote from Pelouze: "Much thought has been given the question from a sociological standpoint, but action upon these thoughts has been hampered by public mock modesty. The question is a very broad one, requiring the co-operation of all of those in anyway interested in the welfare of humanity. There are, however, essentially medical aspects of the matter to which we would do well to give great consideration. One cannot go far back in history of a particular strain of gonococci without being met by facts demanding sober thoughts. In tracing the source of a given infection the most common finding is, that it was acquired where one or many physicians had said it did not exist. As none of us believe in the spontaneous generation of gonococci, we are forced to the conclusion that they were wrong. Such a conclusion raises the question as to how much of the gonorrhea in the world today is here because of the sins of omission or commission of our medical profession."

Wherein does this laxity manifest itself? My observations in a urological practice of ten years would lead me to believe that the general practitioner, as a rule, has very little knowledge of the disease and what little knowledge he may have, he does not impart to his patient. It is the general practitioner or family doctor who gets the case first, and in its incipency the disease is easily cured. It is here that the patient should be acquainted with the dangers of spread and solemnly warned of his duty to himself and to humanity. Then comes the problem of properly treating

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the case to terminate the infection and determine as nearly as it is humanly possible when a cure has been reached. Few doctors realize the gravity of the situation and prescribe, perhaps, a bottle of weak argyrol and a syringe, telling the patient to "use this three times a day." This story has been told to me time and time again. In the case of a female infection often a simple antiseptic douche is prescribed with no other instructions or admonitions. Just recently such a case came into my care, in which a young lady of excellent family contracted gonorrhea, saw her family physician, borrowed her mother's douche horn and as a consequence, mother, father and daughter became my patients. The divorce court was narrowly escaped in this case and would have been resorted to had not the daughter confessed and an explanation of the infection accepted. Tracing the source of infection further, it was found that the young man responsible was pronounced cured by his doctor three days after the urethral discharge had stopped and felt safe in having sexual congress with his sweetheart.

Such gross negligence on the part of the physician cannot be excused. Upon his shoulders must be placed the blame for this series of cases and any serious complication which may have occurred. There is no doubt in my mind but that a very large per cent of all gonorrhea is due to negligence of a like character, i. e.: Failure to give the patient proper knowledge of the disease and too readily assuring him of a cure.

It is not my purpose to offer criticism to any physician who may treat acute gonorrhea which develops beyond the confines of the anterior urethra. Such cases are legion even in the hands of the most noted specialists. Many factors come to play in causing complications, chief of which is the failure of the patient to give his co-operation. One strain of gonococci may be far more virulent than another, traveling with an uncontrollable rapidity, while another may be easily conquered. Upon the natural resistance of patients, defensive fluids depends much. However, it is a certainty that complications are encountered to a far less degree in properly conducted cases.

You would ask them, "What could be considered a properly conducted case?" The multiplicity of methods, drugs, serums, vaccines, etc., is within itself proof that no ideal regime exists. Where there is gathered to-

gether a group of venerologists, the number of ideas presented is often in direct ratio to the number of gentlemen present. There can be no specific cure until some method is discovered whereby the endotoxins of the gonococcus may be liberated in vitro and an active antibody produced. Until such a discovery is made we can do nothing better than rely upon methods which have proven themselves to be most satisfactory. In the past ten years, it has been my privilege to treat a very large number of gonorrheal cases in all possible stages and with all possible complications. During this time perhaps every known drug, serum, vaccine, electric appliance, etc., has been tried in my office and those found worthless discarded. It is my purpose here to present only those which have given me excellent results in acute anterior infections, with the hope that my experiences may prove helpful in checking the spread of this disease.

PROGNOSIS

When a patient presents himself for treatment, it is unwise to give a good prognosis without first making a study of the case. Every discharge should be stained by the Gram method for the Neisserian organism. Not all cases of urethritis are specific. Go into the history carefully to determine, if possible, the following:

1. Incubation period.
2. Number of previous attacks.
3. What complications occurred in previous attacks.
4. How long a time has elapsed since feeling first irritation.
5. How long since discharge appeared.
6. What treatment patient has already had and by whom administered.

Should he come to you after already having seen some other physician or after using some proprietary preparation himself, the chances are very strong that he is on the verge of posterior involvement. Should epididymitis occur the next day or so, he is likely to blame you for it, so safeguard your own reputation by telling these fellows in the very beginning that complications are impending and you may not be able to prevent them. In the prognosis, always bear in mind the possibility of self urethral infection from some posterior focus in patients who have had previous complications. These cases may require long and tedious treatment.

HYGIENE

Having determined that you have a new infection, limited to the anterior urethra, you should first proceed by giving the patient some worthwhile information about his disease. In my private practice he is presented with printed instructions in which he is told the essential facts as to infection, transmission, complications, etc., and warned as to sexual excitement, over exercise, indulgence in alcohol, and failure to properly follow instructions. By the time he has finished reading this he is convinced of the fallacy of the old saying that "Gonorrhea is no worse than a bad cold," and usually gives attention to the business of getting well.

The diet is relatively unimportant except for the absolute interdiction of alcohol. Because of the possible urinary irritation it has been my habit to instruct patients to avoid all spices such as pepper, mustard, cinnamon, nutmeg, vinegar or foods containing them. If, however, water is taken in sufficient quantities and at proper intervals, there should be no need to restrict these elements. At least six ounces of water should be taken every half hour during the day and at night only when awakened with a desire to void, which may be every two or three hours from copious drinking. The proper foods may be listed to avoid constipation.

HYDROTHERAPY

If one desires the very best results in his cases, this type of therapy cannot be overlooked. Daily bathing of the entire body and a special hot sitz bath covering the genitals adds much to the efficacy of the medical treatment. It is realized that this form of procedure is difficult except at some Spa, like the Hot Springs of Arkansas, but can be carried out to some degree of satisfaction in one's own bath tub. The bath room should be warm (96-98 degrees F.), and the tub filled with water at 99-100 F. Here the patient bathes himself 20 to 30 minutes, then if a special sitz bath is not available, he sits up in the tub, runs the water out except about six inches to which is added hot water to the point of tolerance. Ten to fifteen minutes in the sitz is sufficient to cause a vigorous flow of blood to the genitals.

It is not the opinion of the writer that the heat of the sitz kills the gonococcus. One who is conversant with the characteristics of the or-

ganism has learned that, by some not well understood process, the gonophage or autolytic substance is produced during growth which is absolutely specific in destroying itself. Experiments have proven this substance in the test tube and clinical experience proves its presence in vitro. One author is so convinced of this phenomena that he insists that the majority of cases of gonorrhea would recover with no treatment whatever, providing alcohol and sexual excitement were interdicted. It is our opinion that the proven value of the sitz bath finds its efficacy in hastening the production of this autolytic substance.

INTERNAL TREATMENT

In the past this method of treatment has been instituted chiefly to render the urine bland or alkaline to prevent irritation of the urethra upon voiding. In my practice this is unnecessary because of the quantity of water ingested. The aim of internal medication should be to help destroy or prevent the extension of an infection. In the past decade, many so-called urinary antiseptics have been placed on the market, but as a rule they have been unsuccessful. Walther finds value in three, namely, mereurochrome, hexylresorcinol and pyridium. In gonorrhea, I prefer mereurochrome and am convinced beyond a doubt of its efficacy. Twelve grains a day divided into four-hour doses renders the urine lethal to the gonococcus, although microscopically present. We have been unable to culture the organism from the urine of patients taking this dose. It would seem to us that a drug thus influencing gonococcal growth certainly should have some effect in preventing extension of the process.

Mereurochrome is administered in capsules or in enteric coated pills. I have been unable to see any difference in the end results whether by coated pill or uncoated capsules. The drug is given until symptoms of poisoning begin when it is immediately discontinued. Some patients take mereurochrome indefinitely without symptoms, others complain of diarrhoea or gingivitis after a few days. The use of the tooth brush and an antiseptic mouth wash freely, diminishes markedly the likelihood of gum infection. Diarrhoea quickly subsides after withdrawal of the drug. Symptoms of nephritis have never been observed in my practice. Because of the marked benefit of mer-

eurochrome by oral administration, I have discontinued its use intravenously in these cases.

LOCAL TREATMENT

In the literature much is said about the dangers of over treating and but little fear is expressed that we may use too little. Here is where I differ from most men doing genito-urinary work. The object of urethral injections can be none other than to prevent growth of the gonococcus along the mucous surface. Our list of drugs does not contain one capable of penetrating the mucosa to kill the organisms found there. There is no doubt but that they kill themselves in from 4 to 7 days by the production of their specific gonophage. It goes without saying then, that the disease is self limited providing we prevent its progress to new fields. We are reasonably sure that spread does not occur under the mucosa, but rather along the canal where the organisms find new portals of entrance to the deeper layers. Local treatments then should be strong enough and often enough to insure death of all surface organisms without producing undue chemical inflammatory reaction.

For this purpose I have found neosilvol in a twenty-five per cent solution invaluable as a drug for the patients own use. This strength is positively non-irritating to the most delicate and inflamed tissues; and to my mind any solution less than twenty-five per cent is approaching the worthless. The patient is instructed in detail concerning the use of his drug, i. e., urinating before using, gently filling the urethra and retaining the fluid a full ten minutes or longer. His daily regime is so arranged that he is to have a local treatment every four hours. Four of these he gives himself and two are given in the office, so that we may keep a very close check on the progress of the disease. In order that four-hour treatments may be carried out to the letter, it will be necessary for the patient to resort to the use of an alarm clock for the mid-night treatment. This point must be driven home to the patient else he may wish to sleep through the night. It is this long period between treatments which permits extension of the gonococcus and I wish to urge this point upon the profession.

For the office treatments, it has been my habit to alternate between mercurochrome one-half to one per cent and a special prescription

which I have worked out and find extremely valuable. This consists of 15 per cent argyrol and one per cent protargol in a fifteen per cent glycerin solution. These drugs should be freshly prepared daily. The chemical irritation is practically nil, especially with the "A. P. G." solution and these strengths possess definite bactericidal properties. I have never been able to see the value of weak solutions of argyrol such as the five per cent strength which is advocated by many. In the "A. P. G." solution it is believed the glycerine increases the fluid outflow, thus drawing organisms from deeper structures. The protargol does not add to the irritating qualities of the mixture and increases the gonocidal value.

DANGEROUS AND WORTHLESS PROCEDURES

Diathermy, while extremely valuable in certain types of gonorrheal complications, particularly in acute prostatitis, has proven itself not only valueless, but dangerous in acute anterior urethritis. Hunt used this method on two hundred and fifty occasions with a majority of cures averaging six weeks. Michel did not have uniformly successful results in his cases. Posterior involvement occurred in fifty per cent of the cases treated by this method in my office and diathermy was discarded as dangerous.

Vaccines are not advised. Their use is likely to upset what little bodily resistance there is, making the case long drawn out and tedious.

The strong astringents, such as zinc sulphate, have no place in the treatment of these cases and are mentioned only to be condemned. The Valentine irrigator, using hydrostatic pressure has proven itself dangerous in my practice and I am firmly convinced that it should never be used regardless of the drug selected.

STANDARD OF CURE

Kilduffe has outlined an admirable standard of cure in gonorrhea and is well worth following. Essentially, he recommends the following points:

1. Absence of urethral discharge at least two weeks after cessation of treatment.
2. Absence of pus cells in the morning urine.
3. Normal frequency of urination and absence of nocturia.

4. A normal appearance of the mucus membrane of the urethra as ascertained by urethroscopic examination.
5. Normal findings on palpation of the prostate and seminal vesicles.
6. Absence of a discharge after physical exertion and after the provocative use of gonococcal vaccine.
7. Several cultures from the sedimented morning urine.

It is not always necessary to make a urethroscopic or cultural examination. One can be almost one hundred per cent sure of a cure by sounding the urethra rather vigorously one week after cessation of treatment and making careful microscopic examinations of the sedimented urine daily for a week following. Thus two weeks should elapse following the complete cessation of a discharge before a patient is told that he is well.

The method of treatment herein outlined has been followed carefully in the last hundred private cases in my office with complete uncomplicated cures in ninety cases. Of the ten remaining cases, two developed periurethral abscesses, but no posterior involvement. Eight cases developed posterior infection, but without exception the cause could be traced directly to a failure of the patients to carry out instructions.

In the uncomplicated cases the average time of complete cessation of discharge has been twelve days. The shortest time is three days and the longest, four weeks. It is surprising how many cases are apparently cured in one week from the beginning of treatment.

SUMMARY

1. Gonorrhea is a dangerous disease and should be looked upon as such.
2. Much negligence on the part of physicians is manifested.
3. Patients should be taught to fear the disease.
4. Treatment sufficiently vigorous to prevent posterior involvement should be instituted.
5. Follow a standard of cure before releasing the patient.

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DISCUSSION

DR. H. KING WADE, Hot Springs: When the question of the treatment of acute gonorrheal urethritis is brought up everyone is interested and ready to discuss the subject. As has been stated by the essayist there are as many opinions as to its management as there are men in the discussion. It seems almost hopeless to outline a course of treatment for acute urethritis. It is a condition that requires a man to be very versatile in the application of remedies. I find it very hard to depend upon any one drug in its treatment. We have tried to outline the treatment to our friends on many occasions at our meetings. We meet them again next year and are greeted with this question: "What are you doing now for acute gonorrhea," signifying that their attempt to follow out the treatment that we had outlined had been more or less a failure in their hands. Our success in the treatment of acute urethritis is measured more from the standpoint of complications that have occurred than from the length of time it has taken to rid one of the infection. I mean by this the prevention of posterior urethritis, prostatitis, seminal vesiculitis and arthritis. Many factors enter into the treatment of urethritis. The patients' resistance differs and there are many different strains of the gonococcus and even at times there is a variation in the efficiency of the drug that is used. These things make it quite difficult for anyone to do any more than outline a general rule for treatment. I wish to emphasize one thing in Dr. Black's paper and that is that many cases are not sufficiently treated. Most cases that we see are suffering from the lack of treatment and not from over treatment. There is certainly no objection to the patients' using injections throughout the night. I wish to urge the use of non-irritating drugs in the treatment of acute urethritis. The essayist has recommended the use of 25 per cent solution of argyrol and I am in accord with him on this point. We perhaps emphasize the use of water internally in Hot Springs probably more than anywhere else. The frequent urination will certainly discourage the upward spread of the gonococcus. Urinary antiseptics are very good indeed, but should the patient drink a sufficient amount of water the urinary antiseptics ingested are eliminated in very minute quantities. To get a sufficient concentration of the urinary antiseptic it is necessary to cut down the amount of water taken internally and I think more good is derived from imbibing freely of water. The most important thing in the treatment of acute urethritis in my opinion is the determination of a cure. The greatest mistake that we are making is to let these cases out from under our observation too quickly as they infect others thinking themselves to be well. These patients should be kept under observation for at least six

months after they are seemingly cured. There are too many structures in the genitalia that can harbor the gonococcus and pass by unnoticed from an ordinary urological examination and for this reason I urge a longer period of observation after your patient seems to be entirely well.

DR. H. FAY H. JONES, Little Rock: I enjoyed Dr. Black's paper very much. It was a timely one, and I feel that he has dealt with the subject very thoroughly. I further wish to emphasize what Dr. Black said about the lightness in which the average physician treats gonorrhea. So many of the doctors treating gonorrhea release their patients as cured just as soon as the discharge stops. However, it is not always the doctors fault that the gonorrheal patient is not cured, for we have so many "wise guys" that think they know as much about the treatment as the doctor, and they quit the treatment before the doctor discharges them. It is a problem of education, and I fully believe that in the near future the problem of venereal diseases and its control will be taught in public schools.

Regarding the treatment, there is no definite, clear cut rule to follow as a routine. Every case has its own individual problems. I think mercuriochrome by mouth and pyridium, and some of those drugs probably have some effect upon the gonococcus, but it is rather doubtful in my mind that they have much curative value. I agree with Dr. Black in that the use of neosilvol, less than 20%, is rather a waste of time. The drug that I have found very useful for the treatment of gonorrhea is acriflavine in percentages of 1-500 to 1-1000. We fellows away from Hot Springs cannot help but smile when the Hot Springs urologists mention about the great value of the Hot Springs waters in the treatment of gonorrhea. I appreciate, of course, that there is probably some value in the waters, but if the patient would take the same care at home as they do in Hot Springs, there would be very little difference in the time of recovery.

I am sure all of you enjoyed Dr. Black's paper and are very grateful for this presentation on such a vital subject.

DR. G. W. REAGAN, Little Rock: I enjoyed Dr. Black's paper and congratulate him for having the nerve to read a paper on gonorrhea. I have been a doctor for eleven years, attending the meetings of the society almost every year during that time and this is the first time I have heard a paper on gonorrhea before this medical society. It is such a broad subject and so much is to be said that a man hardly has time to do himself justice on this paper. I think Dr. Black covered the subject fairly well in the time allotted to him.

I think one of the main things in controlling gonorrhea, as Dr. Black said, is educating the doctors. I have never seen much concerning the educational feature. I want to relate some experience I had in the Navy. A doctor was on the ship and he had a captain on one ship that wouldn't co-operate with him in having the men come in and take prophylactic treatment, but he believed in education. So this doctor preached to these men all the time on this trip and admonished them about the dangers of gonorrhea, and when he got back nearly all the men had gonorrhea. So, on the next trip he had a different captain, and this captain co-operated with him and caused the men to take prophylactic treatment. When he got back, he only had one or two cases of gonorrhea. It is my opinion that if we ever control gonorrhea it is going to be through the medical profession,

and the medical profession is going to learn enough about gonorrhea to know when gonorrhea is cured and to tell these patients that they are cured when they are cured. And I certainly want to ask the doctors, if you attempt to treat gonorrhea, get some books on gonorrhea and really do some studying on this disease.

I heard one man, a president of the Arkansas Medical Society, at one time say that there was only 50 per cent of gonorrhea cases that could be cured, and he said those were just going to get cured anyhow. I was certainly heart-broken to hear a man who had been president of the Arkansas Medical Society, make a statement of that kind.

The patient's care of himself is one of the important things in the treatment of gonorrhea. Most patients think when they are going to the doctor they have fulfilled their duty in having themselves treated for gonorrhea. He seems to want to go ahead and lead the same life that he did previously. If a patient has gonorrhea and expects to be cured, he has got to live a strict life, and this mode of life Dr. Black has covered well, and it certainly is a thing we have to take into consideration.

I am surprised sometimes, after I give my patients complete instructions over and over, and then if they do not do well, and I begin to question them, I find that they are doing the very things I thought I drilled into them so thoroughly that they never in the world could forget.

Another thing I would like to mention is that the drugs we use should be fresh. Nearly all the drugs we use are dyes and dyes when made in solution deteriorate very rapidly. Neosilvol and argyrol become almost useless in two or three days after they are made up and when the patient is given these drugs to inject, the druggist should make them up fresh and, in my opinion, not over a two days' supply should be given. I never give a supply to a patient that lasts him over two days unless it is a case where he cannot get the drug. I make the druggist to understand that in filling this prescription the drug must be made fresh and if I ever find a bottle of neosilvol sitting around in the drug store already made up, I always remember that druggist and, when a patient asks me if he can take the prescription there, I tell him, no, and the druggists in Little Rock know, whenever one fills my prescriptions, those prescriptions must be made fresh.

DR. I. S. JONES, Little Rock: My memory doesn't go back far enough to remember when I first began hearing a discussion of cures for gonorrhea. The fact that we are still discussing it proves that we haven't yet found a cure. I appreciate Dr. Black's paper. It was thoroughly up to the present state of our knowledge, however, I am not a urologist, but a bacteriologist, and the reason why I rise at this time is that I think Dr. Black spoke with more positiveness about the present state of our knowledge of the bacteriophage than is justifiable. The bacteriophage is very interesting, but I do not believe we have yet arrived at a point of knowledge that justifies very many conclusions about its efficiency. However, we should remember that the knowledge of immunological processes is very much older and more certain. Infectious diseases are cured by immunity. They are terminated by immunity. However, gonorrhea is one of those diseases that has a tendency to become chronic where the invasive power of the organism is equally balanced by the resisting power of the individual. Hence a chronic or static condition obtains. The reason

why we cannot fight gonorrhea by immunological processes is because there are so many strains of the organism. If we could know just what strain of organism is concerned, I believe we could evolve either an anti-serum treatment or vaccine treatment that would be specific and effectual.

Another point I wish to take issue with Dr. Black on is that of the effect of heat as a germicide of the gonococcus. Now, heat is an efficient germicide at a temperature of 42 degrees C. At that temperature it will kill the gonococcus. The difficulty of using heat in the treatment is in applying it. I believe that it would be possible yet—I am not referring to diathermy either, but just plain heat—to invent some practical device for applying the heat, reaching the place where the organism is growing and destroy it. It hasn't yet been done, but I believe that it is possible.

DR. R. H. T. MANN, Chairman, Texarkana: I want to rise in defense of the old doctor. I want you young men to be very patient with us older men, if you please. The most impressive medical subject that I ever heard in my life was in Minneapolis. That is, it did me more good and was more impressive than any other subject I ever heard. I got mad at first and then I got over it. Some man in Minneapolis at the medical convention rose and said, "All you old doctors who had a very limited medical education are not dead yet, but the country will be better off when you are all gone." (Laughter). We have not all gone yet. So you boys be patient with us. I am just asking you, please one other thing, and that is the prevention of this disease. I think these patients should be quarantined. If they had smallpox, we would have no gonorrhea because then they are marked all over. But this thing is hidden. I think, in the absence of a quarantine, if that is impossible or impracticable, that they ought to have a big letter "G" pinned on their forehead until they get cured, and then everybody would know that such a man or woman walking down the street had gonorrhea. If it was a self-limited disease, we would soon have none.

Now, before becoming a bacteriologist, I was just a plain country doctor for a long time, but never a urologist, or I never made a specialty of treating gonorrhea. But necessarily I was compelled to more or less treat a good many that came to me. Well I never succeeded in curing anybody, I don't think. I saw a good many get well. I learned that the less I did the better it was for the patient. As long as I could keep them satisfied without any treatment or with a mere pretense of treatment, I did so. I have actually seen a great many cases get entirely well and remain well without any treatment at all, and I think a good many of them would where the resisting power of the individual is strong. However, the point I wish to speak about now is that I have seen a number of cases suddenly terminated by an intervening attack of tertian malaria where the fever ran very high. I could not attribute that to anything but the heat.

DR. BLACK, in response: It is very pleasing to hear so much discussion on this subject, although such is usually the case when this question is brought before a medical meeting. The fact that no specific in the treatment of gonorrhea exists and that each doctor has his own pet regime to follow, calls for much discussion.

Dr. Mann made the statement that those infected should be marked with a "G." I cannot be so harsh, but it does call to mind the historical fact that in the early days of old England when a public woman contracted a venereal disease her hair was bobbed so that it might be known by everyone who saw her. The rule cannot be applied today. (Laughter). Another semi-historical story is told of Mark Antony who is said to have lost a very important battle because of a gonorrheal epididymitis, the infection having been contracted from Cleopatra. Anyway, it is definitely known that the disease existed long before that time.

I am glad that those who have discussed the paper emphasized the one point which I had hoped to make clear and is probably the most important—tell your patients something about the disease. It is hard to realize just how ignorant the majority of laymen are on infection. Some of them are led by chiropractors and other quacks to believe that gonorrhea is due to a pinching of nerves in the spine. It is due to this ignorance that quacks thrive. They should be taught what the gonococcus is, what the possibilities of complications are and the fact that they might become maimed for life unless properly cared for. A lot of them have the idea that gonorrhea is no more severe than a bad cold. They certainly should be taught differently.

As has Dr. Jones I have had experience with acriflavine and got some very good results, but I believe my results are better with the method I am now using. Dr. Jones referred to the Hot Springs and sitz baths with the Hot Springs water. I want to answer him and the doctor over here at the same time. I specifically stated that I do not believe the heat from the baths kills the gonococci. If you will recall I stated that I believe the heat, especially from the sitz, hastens the production of the gonophore which kills the gonococci. Again I hope you will not get the idea that I am trying to tell you that the Hot Springs water is the only valuable water for these baths, attempting to lure you into sending all your cases to Hot Springs. I do not want you to believe that at all, although I have never had experience with any other type of water. I am frank in saying, however, that I believe Spa treatment for these conditions gives the best results if for no other reason than that the patient gets away from home, leaves his business behind, and gives his entire time to the business of getting well. How many of you men can get your patients to stop work while you are treating them? There certainly are few. This, then, is the important point which is always obtained at the Spa.

I wish to thank you gentlemen for the very excellent discussion of my paper.

THE PROBLEM OF PYELITIS IN CHILDREN*

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The development and progress of urology as a specialty, is practically synonymous with the development of the cystoscope and the progress of cystoscopic diagnostic and therapeutic procedure.

The enviable position of urology today, as a scientific specialty, undoubtedly reflects directly the universally high degree of scientific work done during the past decade by the large number of men engaged in this specialty. The real credit, however, is due those pioneers—Nitze, Brown, Berger, Lewis, Quinby, Portner, and others whose resourcefulness in instrumental designing, and whose fortitude in the use of the cystoscope in the face of almost fanatical opposition, have made this attainment possible. In other words, the development of urology has been practically concurrent with the development and ever broadening use of the cystoscope.

INSTRUMENTS OF PRECISION

Urology in children, however, has not kept pace with the progress of urology in general. The assertion has been made repeatedly, in recent years, to the effect that instruments sufficiently small in calibre are now available to make practical the same plan of procedure in children as in adults. From these assertions the inference is drawn that until very recent years such instruments have not been available and that this accounts for the tardy development of urology in children. A survey of the literature on the subject, however, discloses that these are not the facts in the case. In 1907, Beer designed and began using cystoscopes of 10½ F examining and 12½ F catheterizing. In 1911 he reported his experience in the use of these instruments in a rather large series of cases in children, the youngest female 14 months and the youngest male 5 years of age.

Since that time, very little progress had been made in the improvement of cystoscopes for children until Butterfield in 1924, brought out his double catheterizing scope of 16½ F calibre. In 1928, Sprenger of Peoria, Illinois,

brought out a single catheterizing scope of 10 F calibre, which as far as I know is the smallest catheterizing instrument obtainable. This instrument can be introduced without difficulty through the urethra of a male child of any age.

The real facts which have retarded the progress of urology in children seem to be the opposition to cystoscopy in general, until rather recent years, together with sentimental objection to its use in children. During the past half decade, the renaissance of juvenile urology has brought out a rather large number of contributions, and although each author emphasizes the practicability of cystoscopic procedure in children, in almost every instance he rather offers an apology for his boldness by expressing himself as inclined conservatively towards its use. There can hardly be other than sentimental reason for any special conservative attitude in cystoscopic procedure in children, inasmuch as it has been shown repeatedly that they stand cystoscopic investigation, in all of its phases, even better than do adults. It seems, therefore, that there is no logical reason to assume a conservative attitude if the procedure is needed or advisable, other than the ordinary, judicious care used in adults.

CONGENITAL ANOMALIES

As time has gone on, the widening interest in juvenile urology has stimulated investigation of the basic causes of persistent pyuria and other urological symptoms. The results of this investigation has not only brought about a better understanding of the causes of urological symptoms in children, it has provided a logical starting point in contemplating the genesis of upper urinary tract pathology noted in adult life, notably hydronephrosis, chronic pyelonephritis, phonephrosis, hydroureter, ureteral stricture, and obstructive lesions involving the bladder neck and contiguous structures. (1) Brown and Corbeille in 1923, in a post-mortem study of 80 unselected necropsies in fetuses and young infants, found malformation involving the kidney and the ureter in 20 and 11.24 per cent respectively. (2) Bugbee in 1924 reported a study of 4,903 necropsies in children and reported gross, urinary tract anomalies in 2.3 per cent of the cases. (3) The writer, in 1926 in a post-mortem ureteropyelographic study in 33 unselected necropsies, ranging in age from

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

birth to 12 years of age reported 4 cases of symptom free hydroureter and hydronephrosis.

URETERAL STRICTURE

A review of the progress of urology in children would seem incomplete without mention of ureteral stricture; although it is with considerable trepidation that the writer approaches this hazardous bog. No subject has produced more controversial discussion in urological circles during the past decade, than ureteral stricture. Three principal points in question stand out. Is stricture the immediate cause of symptoms of ureteral obstruction or does certain physiological derangement, as disturbed innervation with loss of muscular tone account for the symptoms in many instances? Is the etiology of stricture congenital or acquired?

Accumulating experience with children has demonstrated that ureteral stricture, which we have been accustomed to think of as a disease of adults, occurs frequently in children. Furthermore, it is here that opportunity presents itself to study this disease in its early stages. Accumulating evidence appears to give a prominent place to the congenital aspect of ureteral narrowing. The fact that symptom free hydroureters and hydronephrosis are present in early life provides food for thought concerning the etiology of these lesions when encountered in adult life.

Hunner has been able to clear up chronic renal pyuria in 15-20 cases of little girls by dilatation of the ureter and thinks the condition that of ureteral stricture, due to focal infection.

In this connection it is the writer's personal opinion that, in the majority of instances, responsibility for the etiology of the difficulty commonly diagnosed as ureteral stricture, can be brought to earth in the midregion between congenital narrowing and focal infection.

URINARY CALCULI

Although the literature is replete with the occurrence of calculi in children, only very recently has any attempt been made to apply cystoscopic and roentgenographic methods of precision in diagnosis and treatment, as practiced in adults.

The (4) writer, in 1928, reported a series of 5 cases of renal and ureteral calculi in children, ranging in age from 2 to 12 years in

which modern urological methods of diagnosis and treatment were applied and in 3 of which calculi were removed by cystoscopic manipulation.

In view of the foregoing reports the frequent occurrence of urinary calculi in children must be entirely apparent. It therefore seems patent that a roentgenogram should be a part of every examination of the child who exhibits symptoms of so-called pyelitis, or hematuria, persistent abdominal pain, or dysuria.

PYELITIS

Of more than 70 articles previously published dealing with urology in children, by far the great majority center about a discussion of pyelitis. During recent years, the broadening scope of cystoscopic investigation has disclosed that the clinical picture as seen from the angle of the general practitioner and pediatricist in many instances, does not represent pyelitis per se. The term pyelitis is evasive and insufficient. Careful investigators have demonstrated that much so-called pyelitis is, cystitis, infected hydroureter, infected hydronephrosis; in fact, infection involving various parts of the urinary tract, incident, or secondary to, congenital defects, in the form of obstruction. It is therefore patent that whenever a supposed pyelitis lingers on, the above viewpoint should be kept in mind and steps taken to affirm or deny suspected congenital defects.

INCIDENCE OF THE INFECTION

The incidence or source of infection is variable according to the age and sex of the individual. The pronounced frequency of pyelitis occurring in young girls over boys substantiates rather conclusively the theory of infection ascending either through the urinary tract or the lymphatics from the vulvo-urethral region. In these little girls the differentiation clinically, of bladder infection and that involving the renal pelvis often presents considerable difficulty, inasmuch as bladder infection is often productive of fever. In several such instances I have had the experience of obtaining a perfectly clear urine by ureteral catheter, thus establishing the source of the pyuria as vesical rather than renal. The clinical picture of pyelitis should include pain or tenderness over the kidney.

URINARY ANTISEPTICS

The voluminous discussion of urinary antiseptics during recent years leaves us still very much in doubt concerning this plan of treatment. Our experience at Mercy Hospital, has not confirmed the enthusiastic optimism of numerous writers who have from time to time advocated this form of therapy. In our hands, intense alkalization with forced fluids has proven generally the most effective form of internal medication therapy. Recently we have been using some of the mercurials intravenously, notably metaphen, and have been favorably impressed with the clinical results. Needless to say this therapy should be used with caution; particularly in children.

MANAGEMENT OF PYELITIS

Pyelitis in children is, generally speaking, a rather more transient ailment than in adults, owing no doubt, to the fact that the factors responsible for retention of urine above the bladder, are less developed in childhood. In other words what may have been a slight degree of hydronephrosis in childhood has developed into a well-established pelvic enlargement with persistent urinary retention in the adult. I believe we can regard every case of pyelitis as an infected hydronephrosis of some degree, and the success of internal medication therapy is definitely influenced by the degree of urinary retention within the ureter of the renal pelvis.

Pyelitis in young boys is of much more serious import for the reason that the upper urinary tract is less vulnerable to attacks of infection, and when infection does set in it usually does so owing to some degree of congenital malformation. For that reason it is likely to prove more resistant to treatment. With these little chaps bladder neck contractions and obstructions in the posterior urethra should be kept in mind. This point can usually be determined by passing a small catheter after voiding to ascertain whether there is bladder retention.

INDICATION FOR CYSTOSCOPIC PROCEDURE

This can be summarized rather briefly and definitely by saying that when the child remains desperately ill with high fever, chills and prostration, that drainage of the renal pelvis by catheter should be instituted without delay. Again, when pyuria persists with loss of weight and general debility, cystoscopic in-

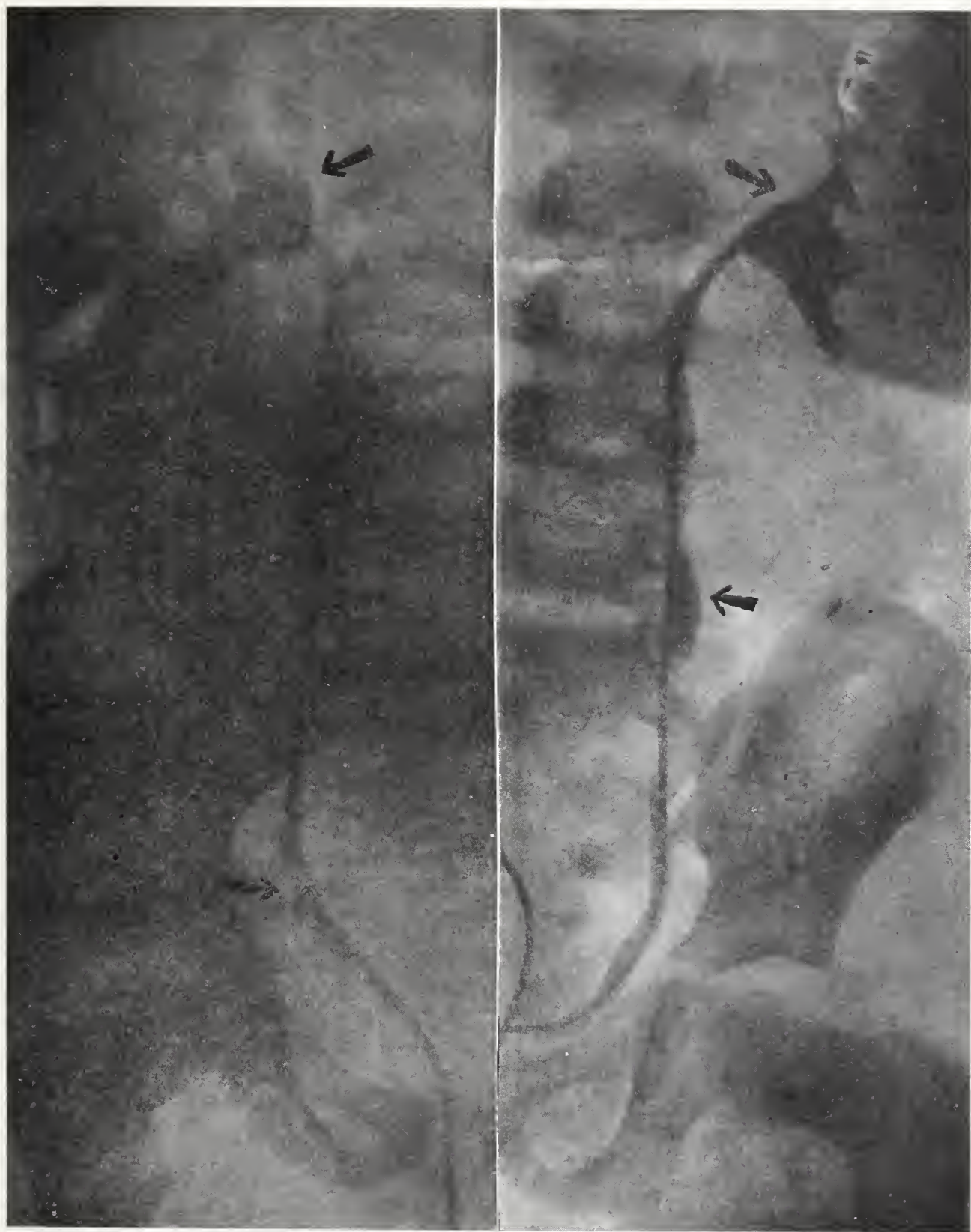
vestigation usually discloses some form of congenital malformation. The crux of therapeutic endeavor in such instances is the establishment of drainage. Much can be accomplished by cystoscopic ureteral catheter drainage of the upper urinary tract, or surgical measures for bladder neck obstruction, once a definite diagnosis is made. To illustrate and illucidate the above discussion I wish to report the following three cases.



Female child age eighteen months. Congenital Bilateral obstruction of ureters at bladder outlets, plus infection. Commonly called acute fulminating pyelitis. Note huge dilatation of ureter.

CASE No. 1

Female child, age eighteen months. Seen in consultation ten days following the onset of high fever, chills and prostration. A diagnosis of pyelitis had been made. The usual plan of internal medication therapy, had been carried out. This patient's condition had grown progressively worse, and when first seen by the writer the child appeared desper-



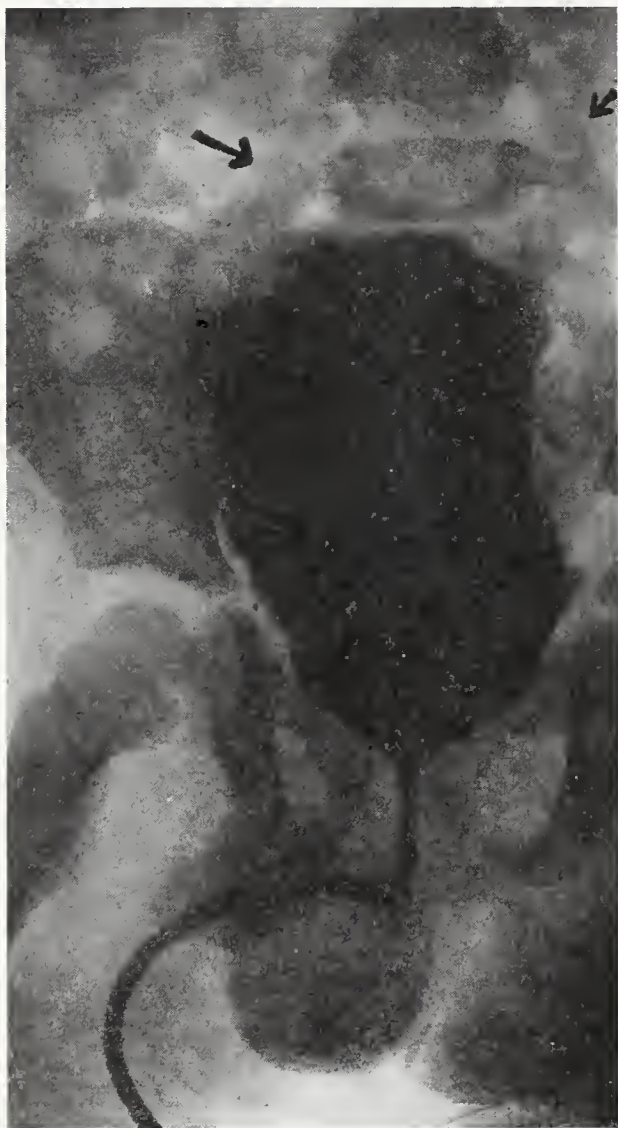
Female child age three years. Chronic retention of urine above the bladder plus infection. Commonly called chronic pyelitis. Note bilateral dilated tortuous ureters and dilated renal pelvis.

ately ill; temperature ranging from 102 to 106, with chills and extreme prostration. The urine contained much pus and colon bacilli. This patient was sent to the hospital and retention catheters placed in both ureters. The urine from each kidney contained much pus

and colon bacilli. The catheters were left in situ four days with daily lavage of the renal pelvis with 1 per cent mercurochrome. The temperature immediately dropped to normal with progressive improvement and early recovery.

Before removing the right catheter a ureteropyclogram was made. Note extreme dilated contour of this ureter.

Discussion: This is a case of bilateral obstruction of the ureteral outlets, with large hydro-ureter and hydronephrosis above, which had become involved in infection. The spectacular recovery with the use of the retention catheters again illustrates the effectiveness of drainage in the control of acute infections of the upper urinary tract.



Male child age four years. Congenital obstruction of the bladder neck with retention of urine in the bladder and above, plus infection. Often called chronic pyelitis or cystitis. Note large irregular bladder outline with regurgitation of fluid into dilated ureters above.

CASE No. 2

Female child age three years. Entered the hospital in a very much devitalized condition. Daily afternoon temperature 99 to 100. Appetite very poor, very much emaciated. Urine contained much pus and colon bacilli.

The history in this case indicated that the above clinical picture was a summary of a persistent general decline covering a period of nine to ten months. Urological investigation disclosed pus from each kidney, dilated tortuous ureters and dilated kidney pelvis. Ureteral catheter drainage with pelvic lavage at seven to ten day intervals was accompanied by a gradual, but steady improvement.

Discussion: This is a case of chronic retention of urine above the bladder plus the infection, commonly recognized as chronic pyelitis. It illustrates the need and logic of ureteral catheter drainage in these chronic cases which have resisted the internal medication plan of therapy.

CASE No. 3

Male child, age four years. This patient entered the hospital on account of painful and frequent urination, of several months duration, accompanied by fever and chills. A mass in the lower abdomen which had been diagnosed as some sort of tumorous growth was found to disappear on withdrawal of 600 cc. of urine by catheter. The urine contained much pus and coccoid bacteria.

A cystogram disclosed a large dilated bladder of irregular outline. Note regurgitation of fluid into both ureters. Cystoscopy revealed a congenital contraction of the bladder neck. Dilation of this at five to seven day intervals was followed by a gradual improvement with clearing of the urine. Urinary antiseptics alternated with alkalization were given in this case.

Discussion: This is a case of congenital contraction of the bladder neck with retention of urine in the bladder and above, often treated as chronic pyelitis. It again emphasizes the problem of obstruction and the use of proper drainage in those so-called chronic cases.

CONCLUSIONS

1. Urological study by cystoscopic procedure in children, has, of recent years, overcome sentimental objection, and is now being as effectively and advantageously done as in adults.

2. Recent necropsy studies of children have disclosed congenital defects of the urinary tract in a considerable percentage of the subjects examined.

3. Clinical observation has disclosed that much acute and chronic infection of the uri-

nary tract in children is dependent upon retention of urine, either in or above the bladder, due to various forms of obstruction, either at the ureteral outlets or the bladder neck.

4. While pyelitis in general is probably best treated by expectant measures, still in those cases in which satisfactory progress is not made, urological investigation should be unhesitatingly instituted, inasmuch as congenital defects may be disclosed, which are the underlying cause of the difficulty. Treatment which corrects this condition is often spectacularly effective.

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DISCUSSION

DR. H. FAY H. JONES, Little Rock: I wish to express my appreciation for this wonderful paper by Dr. Smith on urology in children. It has been my pleasure to see a great deal of Dr. Smith's work, and he has given the medical profession some very valuable contributions. I wish particularly to emphasize that we are prone to be negligent in dealing with urological conditions in children, and therefore we do not give them the urological study that we do the adult. As he mentioned, it is true that the child tolerates the cystoscope much better as a rule, than the adult. In fact, it has been my experience that cystoscopy in the child is much easier than in the adult.

I again wish to thank Dr. Smith for this most timely presentation.

DR. R. L. SAXON, Little Rock: I am very much impressed with the doctor's paper just read. I don't know that I can add anything to it, but I want to bring out a thought here concerning the bacteriology in the early development of the child.

Nowadays, as you all know, there are a great many more children or a greater percentage of children taking artificial food than ever before in the history of man. And of course, taking artificial food creates additional possibilities of infection. This being true, there is a greater chance of bacterial infection in any part of the human body. It occurs to me that perhaps this is one of the reasons that doctors are called on to investigate and look out for infections and diseases such as pyelitis, nephritis, cystitis and other complaints along the urinary tract. I do not think, though, that we should be too hasty in inserting instruments and trying to pry open mucous canals in the human body, unless we are very positive that there is something there that is necessary

to be attended. there is always a likelihood when you probe into any kind of mucous canal anywhere in the body of injuring that mucous canal and carry infection or allowing the infection that is already in the secreting canal or organ, to spread, causing more trouble than you have removed.

I was very much impressed from that standpoint with the paper read here this morning on Cesarean section and the injuries with the forceps to these canals in childbirth, which is very, very true.

The urinary canal is a long, tortuous, compound canal. We have to go through the urethra, through the bladder, through the ureters, into the kidneys. When you do that, you are a long way from home with your probe, with your sound or with your catheter or with your medicine. I do not mean to intimate that there are not cases which cannot be treated and benefited by these instruments and by this method, but I simply want to emphasize the point of caution; not to be too hurriedly invited into this field, because you may do more harm than you do good. (Applause).

DR. R. H. T. MANN, Chairman, Texarkana: Dr. Smith and the other men who do this class of work are to be congratulated, because it represents the highest skill known in medicine.

If there is no further discussion, we will ask Dr. Smith to close.

DR. SMITH, closing: First I wish to thank the president for his kind remarks. I am entirely in accord with the last speaker, in that a child with pyelitis should be studied carefully, clinically first of all. The cystoscope is only a means of verifying our deductions and should be the last phase of the survey, rather than the first. However, I feel compelled to repeat that when its use seems indicated there is absolutely no contra-indication to its immediate use in a child of any age. Often its use is more important than in the adult for the reason that situations, which are the result of obstruction in certain parts of the urinary tract, can be accurately diagnosed sufficiently early in life to permit a correction of the difficulty, thus avoiding prolonged illness and eventual damage, often destruction of the vital renal function. To make myself clear I will say that I am firmly convinced that some form of obstruction either involving the bladder outlet, the ureter outlet, or the renal pelvis outlet, is the basic factor in all cases of bladder or kidney infection. The fact that many cases clear up under expectant treatment does not disturb this viewpoint, as the obstruction may be only mildly obstructive and the acute exacerbation is due to a sudden increase in obstruction due to local edema. Urethral stricture is a concrete example. A man voids freely yesterday and today has complete retention. Fibrous tissue does not form over night, but edema does.

Urological work in children is tedious and it is to the younger men we must look to take up this work.

I am grateful to Dr. Jones for his discussion of my paper and have admired his work along this line for some time.

SOME PHASES OF ACUTE STREPTOCOCCIC INFECTION*

S. F. HOGE, M. D., Little Rock

The clinical expression of bodily response to the successful invasion of the streptococcus is quite familiar to every practitioner of medicine. It is so frequent and so diversified, so common and unexpected that it occupies a "near first" place in our daily roster of disease. It is not at all uncommon to hear the remark that a patient is dying with a streptococcic peritonitis, that another with streptococcic laryngitis and pneumonia, another with streptococcic endocarditis and myocarditis, another with streptococcic meningitis, another with puerperal sepsis due to the streptococcus, and even many other fatal conditions might well be added; the causative agent of which is the streptococcus.

The usual virulent attributes of this particular organism is familiar to all. To attempt a review of the many phases of a streptococcic invasion would prove almost an impossibility and if accomplished would lend little to our present knowledge. The aim of this paper is to emphasize some of the points of similarity in the apparently different clinical entities and not to deal in the larger terms of the disease. Oston (1) in 1881 was the first man to call attention to the difference between the chain formation of the streptococcus and the cluster formation of the staphylococcus. Fehleisen (2) in 1883 and Rosenbach (3) in 1884 were able to secure the organism in pure culture. In 1885 Passet (4) laid the foundation of the pathogenic properties of the streptococcus upon a scientific basis. Since that time our most brilliant minds have sought to solve the problem of streptococcic infection, and despite the knowledge gained from the tremendous and serious epidemic of 1918 and 1919, the present milder epidemic of 1928 finds us very little better prepared to combat the invasion on a scientific basis. We are yet far from an agreement on even a tenable classification of the apparent varieties of the streptococci. Much discussion still concentrates about the peculiar and suggestive action of these organisms on hemoglobin as bound in the erythrocytes. The differentiation between the hemolytic and non-hemolytic strains is not so clear nor so im-

portant as was previously believed. The biologic points of differentiation have added much to our knowledge in the classifications of these great groups.

Let us abridge this most interesting field of scientific bacteriology and study the defensive mechanism on the part of the body in an attempt to prevent the successful invasion of the streptococci. The clinical and histo-pathological features of all infections resemble each other to a certain degree, while beyond this, differences become evident which serve to place them into classes or groups. A staphylococcic infection does not yield the picture that one finds where the streptococcus is the causative agent and vice versa. A clear understanding of these differences offers many suggestions as to the type of infection and may explain the severity or mildness of the toxemia and suggest a proper therapy.

There are certain tissue changes accompanying the streptococcus infection that are quite common and very characteristic (5).

These are probably best studied in the lesions of erysipelas. There is a profuse infiltration of the crevices of the tissue and the lymphatic channels with the streptococci. The blood capillaries are rarely invaded. Edema is abundant and diffuse. The chief nomadic cell of defense is the mononuclear wandering cell and not the polynuclear. The completion of the destructive process with liquifaction, necrosis and pus formation is infrequent and when present is possibly associated with *staphylococci* toxic products. The blood supply is exaggerated and the osmosis of fluid into the tissues abundant. The point to attract our attention here is that every opportunity is present to encourage the spread of infection and every opportunity to thwart its progress and complete the liquifaction necrosis with pus formation is either curtailed or absent.

The histo-pathologic picture of streptococci infection of the mucous membrane is in its essential attributes, very similar to that described for erysipelas. In the streptococci sore throats the mucous membrane is reddened (Ludwigs angina) and the lymph nodes in the line of drainage bear definite evidence of invasion and may break down as a result of the organisms or remain hard and nodulated for a time and subside never having reached the pus stage. Lymphocytes and small mononuclear cells dominate the histologic picture, while the polymorphs play a minor role

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

unless other pyogenic bacteria are present.

In the study of the lung tissue the site of streptococci pneumonia we have two pictures which differ in some respects. In the one the process is rather limited to the area of the bronchioles, small hemorrhages may be noted, associated with lymphocytes and small mononuclear wandering cells and few polymorphs. The walls of the alveoli are decidedly thickened from the out-pouring of mononuclear cells, edema, exudate and fibrin. This process fades out into the surrounding lung structure and yields that picture termed interstitial bronchopneumonia.

The other lesion is quite similar in many respects, except that the diffusion, so characteristic of streptococci infection, controls the picture and eliminates the nodular effect of the bronchiolar type. This more closely resembles the picture seen in erysipelas.

Streptococci peritonitis is a still more graphic picture of diffusion and lack of focalization.

These examples have been presented so that a clearer contrast might be drawn between those infectious processes which tend to be more or less localized and as a result presents quite a different clinical picture and therapeutic problem. A staphylococci abscess or staphylococci pus has been called laudable pus and was not viewed with alarm. Yet a staphylococci cellulitis like the streptococci cellulitis, almost always terminated fatally. No one hesitates to incise an abscess when a good wall of resistance protects the surrounding structures from an over dose of toxin which may be carried into the tissues along the line of incision. To incise an area, the site of a diffusing cellulitis would provoke a variety of opinions. The resistance offered by the tissues is a factor very much more difficult to interpret. The anticipation that pus will form may be withered and lost, since this is not a dominant characteristic of streptococci infections. Each case should be individualized and the procedure adopted to it. Free and generous incision is followed not infrequently by most gratifying results. It seems that the whole problem centers around the volume of toxin present and the dosage at which it is diffused into the body structures. Parrish and O Kell (6) in considering the various factors that might be given as explaining the underlying cause or causes for the different clinical entities, investigated the facts of virulence of

organisms, resistance of host, site of infection, bacteriophage and dosage, etc., and were led to believe that the problem of dosage of toxin delivered to the body was in all probability the most important single factor controlling the clinical picture.

This leads us to the third and last phase of streptococci infection which we wish to discuss in this paper. This deals with the individuality of the supposed different strains and suggests the proper type of *serum* therapy.

A very great deal of information on this subject has been gained since the Dicks of Chicago and Dochez of New York identified the streptococcus of scarlet fever. The tendency seems to be to consider three main groups and possibly a fourth. The scarlet fever streptococcus attracts most of the attention. Birkhaug (7) is emphasizing the strain which causes erysipelas. Then comes the undifferentiated hemolytic streptococci and fourth and last the streptococcus cardioarthritic isolated and studied by Small (8) and his co-workers. Let us dismiss the last one in that it is in reality a non-hemolytic streptococcus, splits insulin and produces a chronic rather than an acute clinical picture. The group of undifferentiated streptococcus is like all omnibuses that serves every body, but services no one. The distribution of the scarlet fever streptococcus is quite wide spread, almost generalized.

Stephens and Dochez (10) studied the bacterial flora of the throat during an outbreak of what is familiarly termed acute streptococci sore throats and were surprised to find the organisms so closely related to those identified as the causative agent of scarlet fever. These cases however did not show sufficient anti-body substance to yield a positive Dick test for Scarlet Fever. Rosenow (9) in 1926 carried out a similar study and identified the organism as that of the scarlet fever group although the patient showed none of the cardinal symptoms of Scarlet Fever. He isolated the same type of organism from an infected wound of the finger. This was not one of the patients included in the study made on streptococci sore throats. Williams (11) in 1925 identified the scarlet fever streptococci from a wound, from an endocarditis and six from excised tonsils. Harris and Brown (12) identified the beta-hemolytic streptococcus in 67 per cent of puerperal infections, despite the fact that normal genital tracts do not harbor this particular organism. They do not record any attempt to

establish the relationship of this organism to that of the streptococcus of scarlet fever.

From the findings of these various men and the work done in our own laboratory (not published) it is more than suggested that the streptococcus of scarlet fever is the dominant organism of the group and that the therapy suited to scarlet fever should be applicable to all the different strains. Parish and O Kell (13) state that the scarlet fever streptococcus is practically the only streptococcus that is sufficiently virulent to generate an antitoxin in the horse and that this antitoxin should be looked upon as a universal antitoxin. That anti-scarlet fever serum should be administered early to all the acute streptococcic infections and in full and repeated dosage (10 cc. intramuscularly every day for 5-10 days). That its effects are more definite on the acute phase rather than on the subacute or chronic phase.

Sanderson (14) Capon and McWilliams observed marked benefit on the acute phase of a series of cases, but no results on the sub-acute or chronic states. About a year ago we started out on the same hypothesis and to date our findings corroborate very closely those referred to above.

SUMMARY

In conclusion let me reiterate that:

1. The histopathologic picture of acute streptococcic infection shows a marked resemblance in each instance.

- (b) That a diffuse cellulitis without pus formation is most common.

2. That the dosage of toxin delivered to the body determines the clinical picture to a marked degree.

3. That the scarlet fever streptococcus dominates the field in toxic manifestations and is able to procure an anti-toxic serum in the horse.

- (b) That this universal serum (scarlet fever anti-serum) should be administered in acute streptococcic infections, even if the cardinal clinical symptoms of scarlet fever are wanting.

1. Ogston. British Medical Journal. 1881.

2. Fehlsen, Aetial D erysipelas. Berlin, 1883.

3. Rosenbach. Mekroorg bei Wundenfektion Wusenboden. 1884.

4. Passet. "Untersuch Uber die eitrigen phlegmen." Berlin, 1885.

5. MacCallum. Text Book, Page 521.

7. Burkhang, K. E. Bulletin Johns Hopkins Hospital. 1925, P. 307.

8. Small, J. C. Am. J. Medical Sciences. May, 1928. No. 574.

9. Rosenow. J. A. M. A. 1926. 86, P. 9.

10. Stevens and Dochez. J. A. M. A. 1926. 87. P. 2139.

11. Williams. Am. J. Public Health. 1925. P. 129.

12. Harris, J. W. and Brown, J. H. Bul. Johns Hopkins Hospital. Vol. XLIV No. 1. January, 1929.

- 6 and 13. Parish, H. J. and O Kell, C. C. Lancet. P. 746. April, 1928.

14. Sanderson, Capon and McWilliam. Lancet. July, 1927.

DISCUSSION

CHAIRMAN MANN: I don't think a paper of this kind should pass without being discussed.

DR. DON SMITH, Hope: I just heard the last part of the paper. I understood him to say that the anti-streptococcic serum should be administered in scarlet fever.

DR. SMITH: Well, I just want to say this, that if he includes the scarlet fever serum on the market now put up by some of the laboratories, I do not believe that the serum does any good at all. I don't think it helps the underlying infection at all and I think so often when it is administered that you get a serum sickness that is infinitely worse than the scarlet fever. That has been my experience.

DR. R. H. T. MANN, Chairman, Texarkana: There has not been a disease discovered hardly in the last fifty years that has not been due to infection. I am not going to make a talk myself on it, but it is too important a paper for this society to pass up lightly. When the great scientists of the world are studying and working in their laboratories and discussing the question as to whether or not man will live in the world or bacteria will take the world and man disappear, I say this is a profound question for us. I certainly have enjoyed Dr. Hoge's paper and I want him to close the discussion.

DR. HOGE, in response: I had rather anticipated some difference of opinion on the phase of treating streptococcic infections with scarlet fever antitoxin rather than streptococcic antitoxin. I very much appreciate Dr. Smith's discussion although he was laboring under the opposite impression to that which I had tried to express. Let me repeat that the weight of evidence accumulating abroad and in our own country would indicate that streptococcic serum does not yield the good results that are obtained with scarlet fever antitoxin even though the diagnosis is not that of scarlet fever.

I was rather surprised while down at Hopkins this year to find them saying that insofar as the anti-streptococcic serum was concerned, in the acute phases of streptococcic infection that it had just the value of horse serum and nothing more. The other organism, of course, of the streptococcic group is the streptococcus of erysipelas. Birkhaug and his co-workers in New York are strong advocates, and are backing it up by an excellent piece of laboratory work, believe that the organism that produces erysipelas is sufficiently toxic to generate an anti-body substance in the horse serum which is rather specific for that particular organism. Our friends across the water, however, not only in England, but in France and Germany, are more of the opinion that the scarlet fever streptococcus is the dominant toxic organism and that many of the other infections that we are attributing to non-scarlet fever organisms are in reality modified types of the scarlet fever streptococcus. They are strongly of the opinion that the anti-scarlet fever serum, administered in fairly large dosage and early has a decided effect upon the clinical course of the case. They admit and we admit here, that after the acute phase has passed, and the disease has slipped into that sub-acute phase, or the sequela appear the use of all sera has produced no results. It must be given, as most of these sera are given, early, in large dosage, before the real acute phase has stamped its impression and diffused the organisms throughout the body, in which event it becomes a generalized infection; then no serum seems to do particular good. (Applause).

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Editorials

ARKANSAS MEDICAL SOCIETY
1,193 STRONG

The annual roster of the Arkansas Medical
Society published in this issue of the Journal
shows 1,193 members for 1929.

This list is composed of a very select group
of registered physicians—the cream of the
2,000 in the State. The State Society is hon-
ored by having such representative physicians
on its list and, in turn, the members may feel
a just pride in belonging to this organization.
The requirements for membership are grad-
ually being made more difficult. Only by such
conditions of eligibility can the high standard
of the Society be maintained, therefore, affilia-
tion with the Arkansas Medical Society is
made more desirable.

The officers of the State Medical Society are
limited in the work of building up the organ-
ization because membership is wholly based on
the various county societies. No physician,
no matter how prominent or eligible, can be
made a member except he first is affiliated
with his county medical society. Therefore,
it behooves the officers of the county organiza-
tion to invite every physician who is eligible
and desirable in the county to affiliate.

United effort is more necessary than before.
State Medicine is the bogey the Legislature
holds before the medical practitioners at every
biennial session. Even the Congress of the
United States is asked to eneroach on the field
of the medical practitioner by increasing the
favors granted ex-soldiers, their families and
dependents. Private concerns, corporations,
companies employing many workmen view the
field of medicine with an eye of economy and
the public is led to believe that the private
physician is a luxury which can be avoided by
group care. In some parts of Arkansas there
has been organized "Industrial Contract Prac-
tice," and minor element is found willing
thus to commercialize the profession and to
depart from the ideals and traditions that
have made progress and seientific achievement
possible.

The annual dues of the Arkansas Medical
Society, beginning with January, 1930, have
been increased to five dollars. The in-
crease of three dollars to five dollars is made
to create a fund whereby active measures can
be taken to eliminate many objectionable feat-

ures that exist today in the practice of medicine in Arkansas, and to create new features that will benefit the Arkansas Medical Society as a whole and will be to the advantage of every individual member. The increase in dues is so trifling, amounting to less than ten cents a week, while the benefits are so promising that no objection has been received from any quarters.

CANCER CONTROL

The insistent increase in cancer mortality in spite of the attention given to the cause, cure, and prevention by the Arkansas Medical Society and the American Society for the Control of Cancer, with its subordinate branches throughout the United States, is discouraging. The increase continues at the rate of two and one-half per cent per year, and it is especially a matter of concern in Arkansas that the State's increase is above the national average. With a death rate of 95.9 of 100,000 population in the Registration area, and a total of over 100,000 deaths annually in the United States, cancer control is engaging the earnest attention, not only of the profession, but the United States Government which officially sanctioned the observance of "Cancer Week," October 21 to 26. Governor Parnell also issued a proclamation, calling upon the citizenry to observe the week, and the same course has been pursued by other governors in many States.

The various speakers at civic and lay meetings of all kinds dwelt on the importance of not neglecting the appearance of degenerating moles and warts, and other skin irritations, which when neglected are likely to develop cancer especially among older men and women. They informed their listeners of the danger signals affecting the breast, uterus and other organs that may be affected with early symptoms of malignancy. The extent of cancer mortality was discussed and they presented statistics to show that cancer mortality is second only to tuberculosis, further, that as tuberculosis decreases cancer increases. It is plain that this is no time to allow any slackness of effort, but rather it is incumbent on the medical profession to redouble its efforts to control and eventually extirpate this dread and insidious plague.

A NEW MEDICAL JOURNAL?

Why the question mark following the caption? Because this new venture "Medical Mentor," official organ of the American Medical Editors and Authors Association, while perhaps classified as a medical journal it, strictly defined, is not one. It really is devoted to the interest of editors and writers in medical publications. The Medical Mentor is a distinctive publication in magazine form, with 94 pages of reading matter plus 14 pages of advertising and the cover, the back of which also is devoted to advertisements. That is a pretty good start in advertising patronage for a new venture, and argues a prosperous future. Dr. H. Lyons Hunt of New York is managing editor and Dr. Thomas L. Stedman of New York is editor-in-chief. It is published by Medical Editors and Authors Press, Inc., Baltimore, Maryland, with the executive and editorial offices at 412 West End Avenue, New York City. Subscription price is \$3.00 yearly.

In the first issue there are five very readable communications on various problems and responsibilities of medical editors and writers, a debate section, a history of medical journals, a legal department, talks between doctor and layman, a library section, hobbies of medical men, a short story and a book review department.

Here is an excellent start for a magazine in a new field and we extend our congratulations and good wishes for the success of the new literary venture.

HEALTH ACTIVITIES

Recommending that the tendency toward over specialization in clinics be discouraged, without diminishing the efficiency gained through the concentrated attention of physicians upon certain types of work, a report just published by the Associated Out-Patient Clinics Committee of the New York Tuberculosis and Health Association emphasizes the value of promoting complete periodic health examinations of patients receiving treatment in specialized departments.

The medical clinic is pointed out to be the distributing center, as well as the diagnostic focus of the out-patient department. The report treats extensively of the principles of coordination involved, and presents a survey of the functional, educational and administrative relations of the medical clinic under descrip-

tive titles such as "Responsibility for Co-ordinating Medical Service," "Periodic Health Examinations," "The Medical Clinic and Its Subdepartments," "Relationship to Tuberculosis Clinic," "Relationship to Cardiac Clinic," "Relationship to Skin and Syphilis Clinic," "Relationship to Dental Clinic," "Staff Rotation in the Medical Clinic," "Relation between Clinic and Ward," "Relation to Admissions," "Medical Eligibility," "Medical Clinic and Social Service," "Health Education in the Medical Clinic," and "Equipment for Medical Clinic."

In a foreword to the report Michael M. Davis, Ph. D., states: "The authors have been wise in dealing not merely with the factors of clinic organization and administration by themselves. They manifest an appreciation that good professional equipment and well-devised machinery of organization can do little more than to create conditions under which the trained physician can do effective work. They recognize that to achieve results with the sick, the personal interest of the doctor in the patient and the personal confidence of the patient in the doctor must be developed and maintained in the clinic. They indicate conditions under which they believe this necessary aim can be accomplished."

In discussing staff rotation, the report depreciates the danger that men working on clinic staffs tend toward an increasing specialization, and may not receive a broad training in general medicine. "Thorough training in general medicine is essential," states the report, "to the proper development of a physician, whether he intends to practice a medical specialty, internal medicine or general medicine and surgery."

Marked attention is devoted to the demands for social service in the specialties. "The physician's problem is to restore his patient to health, efficiency and earning power at the earliest possible moment. In order to do this he must have before him all the facts germane to the patient's condition. Confronted with certain symptoms that in themselves are insufficient evidence for a diagnosis, the physician may need data relating to the patient's personal and family health history, habits and environment.

"Successful medical treatment often depends on the physician's recognition of the influence which the patient's personality and his social and economic conditions have on

prevention and cure. The patient requiring modification of mode of life as well as medication needs social adjustments in order that medical treatment may fulfill its purpose.

"Before treatment can be instituted or completed, it may be necessary to make social adjustments, to educate in health activities, to influence behavior. Where response to treatment is unsatisfactory, where co-operation is poor, the physician may wish to know what are the untoward factors in the patient's life that influence his reactions. These factors, too often disregarded, must be recognized by the physician in dealing with this patient. It is for the purpose of rendering this service to the patient and thus assisting the physician that medical social work is organized."

Copies of the report may be obtained by addressing the New York Tuberculosis and Health Association, 244 Madison Avenue, New York City.

CO-OPERATION OF THE MEDICAL PROFESSION WITH THE RED CROSS

The late war furnished to many medical men the opportunity of seeing in one week more wounds, fractures, abrasions and contusions, demanding up to the minute treatment with makeshift appliances than the most assiduous ambulance-riding intern, attached to an emergency ambulance in a crowded city, happened upon in a year. Here, too were concentrated on a great scale the problems that fall within the scope of public health work, sanitation, disease prevention and immunization. Many medical men profited personally by their contact with emergencies of this sort and kind, in a way that added considerably to their professional stature. Necessity brought into play many aids to medicine, and surgery which would otherwise have been dormant until called into play by some major disaster or catastrophe where numerically the cases approximated those of war time.

Perhaps because of this striking advance in procedure on a large scale—the results obtained in the major disasters during the past few years have been so outstandingly characterized by successful handling. The national organization which has devoted much effort to developing an exact science the art of caring for the sick and wounded in major calamities is, as it was at the time of the World War, the Red Cross. Chartered by Congress especially to "carry on a system of national and



America's answer to humanity's challenge

international relief in time of peace and to apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods, and other national calamities, and to devise and carry on measures for preventing the same," it is a semi-official agency. Where local Chapters are prepared when disaster strikes, the leadership in relief work is generally assumed by them. Each community, therefore, begins its own relief work through the medium of the local Chapter. The National organization, as such, participates or assists in this work only when the community is not able to cope with the problem or when assistance is requested.

There is always, in disaster, an emergency period where immediate needs, aside from rescue work, are food, shelter, clothing and medical and nursing care. Rebuilding homes and other rehabilitation problems are matters for later consideration, but life and health must be sustained throughout the critical period. Those seriously ill and injured are taken to hospitals in the community or in neighboring cities. First Aid dressing stations

and dispensaries in various parts of the disaster area; expansion of existing hospitals or the organization of emergency hospitals are frequently necessary.

Many medical and public health problems are not limited to the emergency period alone, but marked increase in illness among refugees may occur. Pneumonia and other respiratory infections, following exposure are not uncommon. Typhoid fever caused by contaminated water, scarlet fever, measles and smallpox may occur in epidemic form. In tropical climates dysentery and malaria may increase.

Special maternity service must be provided where the disaster involves a large number of people.

There are two major medical problems in nearly every large disaster, viz: Medical and hospital care of the sick and injured—and the health supervision of the disaster area. From an administrative point of view these are distinctly separate problems and must be so regarded in organizing the relief work. The first is the responsibility of the local physicians; the second is the duty of the constituted health authorities.

The Red Cross does not assume the responsibility for the care of the sick and injured; neither does it undertake to direct the health activities in the area. These are clearly the function and duty of local physicians and health agencies. If, however, a community is without medical service, as happens occasionally, or if there are not enough physicians to handle the problem, the relief agency must naturally share in this responsibility, but there is no attempt on the part of the Red Cross to supersede local physicians, or to take over the work which rightfully belongs to them. Every effort is made to maintain and restore a normal relationship between physicians and patients.

The Red Cross can render the best medical service in disasters, it is believed not by attempting to sponsor these duties, but by providing for the local medical profession and health authorities the supplies, facilities and personnel which they lack and need for the emergency.

The Red Cross Medical Service makes every effort to work in the closest co-operation with the local medical profession. The need for dressing stations, dispensaries, medical service at refugee centers, expansion of existing hospitals, establishment of emergency hospitals, providing or securing supplies and equip-

ment or the employment of additional medical and nursing personnel is determined with their advice and counsel. It is fully recognized that the services of local physicians form an integral part of the relief and rehabilitation work and that their fullest co-operation is necessary to restore the refugees to normal living conditions.

In disasters covering a large territory it is frequently necessary to introduce additional medical and public health personnel to help survey the area and determine the critical needs. Representatives of the United States Public Health Service, the Medical Service of the United States Army and physicians with previous disaster experience frequently volunteer their services. It should be clearly understood however that where this is necessary they are used primarily for administrative purposes and not for treating the sick and injured. The latter is left to local physicians wherever possible.

Where it is necessary to employ physicians for service at dressing stations, dispensaries, et cetera, preference is always given to local physicians.

Disaster relief services, as well as other peace-time services of the Red Cross are possible because of the nation-wide character of its membership. Invitation to enroll in this organization is extended, for the coming year, between November 11 and 28.

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Editorial Clippings

CHAIN STORE OR DEPARTMENT STORE
MEDICINE IS DETRIMENTAL TO
THE WELFARE OF THE PUBLIC.
IN NEW YORK STATE A LAY
CORPORATION CANNOT
PRACTICE MEDICINE

State operation and State control of medicine ruined medical practice in Germany and has given the people of that country the worst medical service administered in any civilized country in the world.

When an institution such as a university or a corporation enters into the practice of medicine as is the case in many instances at the present time, there come up certain points of interest to the medical profession.

A university is endowed for education, re-

search and scholarship, and when it enters the practice of medicine it is dealing unfairly with the private practitioner. "Unfair," because this institution has the enormous advantage of reputation and size to attract patients. "Unfair," because of endowments it is able to practice medicine at much lower rates than must prevail in private practice. "Unfair," because it is the only department of the university which even considers entering into the business which it aims to teach. "Unfair," because even if it charges large fees its prestige would make it an impossible competitor with the private practitioner.

Much is being said by economists about only the very wealthy and the very poor getting the maximum of medical service, and so leaving the great middle class unable to procure the so-called maximum service. This statement is not accepted by thinking medical men. We believe that the private practitioner is giving good service and sees that his patients get what they need at a price they can afford to pay.

There is a strong tendency at the present time to systematize or machine out the most desirable thing in the practice of medicine and that is, the very personal contact of physician and patient. This personal contact cannot be removed without jeopardizing the best interest of the physician, the patient and the public. Chain store or department store medicine is detrimental to the welfare of both the physician and the public.

It is important under the present standard of ethical procedure that groups practicing medicine must adhere to the same ethical principles as regulate individuals. Because of their size and influence, corporations are in no way relieved of the ethical responsibility that applies to general practitioners. If the staff of corporations engaged in the practice of medicine fails to recognize this fundamental principle then all the men connected with the staff should be amenable to the same discipline as if they were individual practitioners.

In Illinois a lay corporation cannot practice law and the bar association sees that it does not. With our Legislature composed largely of lawyers we fail to understand why the Legislature is not willing to throw the same safeguards around the medical profession that it grants to the legal profession.

—*Illinois Medical Journal.*

MISCELLANY

A SKETCH AND ACHIEVEMENTS OF DR. KELLER, ARKANSAS' MOST DISTINGUISHED SURGEON IN THE CONFEDERATE ARMY

FRANK JONES, Little Rock

Dr. James McDonald Keller was born January 29, 1832 at Tuscumbia, Calbert County, Alabama. He was the son of David and Mary Fairfax Keller. His mother was a granddaughter of Governor Spattswad of Virginia and a cousin of Robert E. Lee, and ninth of ten children.

He attended Old Field School and the University of Louisville at Louisville, Kentucky. He was a great Latin student, and taught it before he was eighteen years of age. In 1852 at the age of twenty he was graduated and started practice in Memphis, Tennessee.

His historical practice started when Fort Sumpter was fired upon. The organizing and putting into operation adequate hospital service at Memphis, was Dr. Keller's first service. Just before the battle of Shiloh he was ordered to report to General Hindman, who was director of First Army Corps. After the battle, he was made chief surgeon of this department with the rank of major.

He first came to Arkansas as a member of the staff of General Hindman. Because of climatic conditions and other agencies his health became much impaired, and in 1863 he reported in person to the Confederate Governor at Richmond for a change in location. He was assigned to duty as medical director of hospitals at Mobile, Alabama. After its fall, he was assigned to duty as surgeon on the staff of General Forest, where he served until the end of the war.

Dr. Keller married Miss Sally Phillips, who was born August 22, 1831 in Jefferson County, Kentucky. During the war he had left her and their two children in Memphis, Tennessee. He did not see them for four years, and when he returned at the close of the war he failed to find them in Memphis. In the meantime, they, with other women and children of Memphis, had taken refuge across the river after being run out by the Union soldiers. Had it not been for an old negro servant, they would have no doubt perished.

Dr. Keller was principal of the School of Medicine at Louisville for a number of years.

He then resigned and moved to Hot Springs but did very little medical practice in his latter days.

His wife died at Hot Springs in 1906, and he followed her in death eight years later on April 7, 1914. In honor of them was named the J. M. Keller Chapter U. D. C., which they enjoyed attending a number of times before their deaths.

They were the parents of two children, one of whom is still living—Murry, who is in the mercantile business at Chicago, Illinois.

Personal and News Items

BORN—To Dr. and Mrs. E. O. Day, 2320 Arch Street, October 5, a daughter.

Dr. Alvin W. Strauss of Little Rock announces the association of Dr. Jerome S. Levy with offices in the Exchange Bank Building.

Dr. G. D. Murphy of El Dorado has returned from Chicago where he has been attending the Pediatric Clinics.

Dr. O. C. Melson, Little Rock, has returned from a recent visit to the Mayo Clinic at Rochester.

MARRIAGE—Dr. Harry E. Williams of Pine Bluff to Mrs. Emily Perrin of Philadelphia, October 21, 1929.

The Arkansas Medical Society was granted a petition October 11, 1929, for incorporation. The present officers failed to find any record of incorporation at the time of its organization in 1875.

Dr. W. F. Smith of Little Rock, Division Surgeon for the Missouri Pacific Railroad Company in Arkansas, was elected a member of the Board of Governors at the Chicago meeting of the American College of Surgeons.

The First Councilor District and Northeast Arkansas Medical Society met at Harrisburg, October 17. The officers for the Society are: L. H. McDaniel, Tyronza, President; W. W. Verser, Harrisburg, Councilor; W. M. Majors, Paragould, Secretary and Treasurer.

The annual two-day public health conference was held at the State Capitol, Little Rock, November 14-15. Dr. C. W. Garrison, State Health officer, all county health officers, public health nurses and other officials interested in the administration of public health measures were in attendance.

Questionnaire on the extent of use of former U. S. Pharmacopoeial Drugs, Chemicals or Preparations: The Committee of Revision of the U. S. P. X., in preparation for the coming Revision is desirous of learning to what extent there is professional demand for medicinal products which were official in the Eighth or Ninth Revisions, but which were not admitted to the U. S. P. X. Physicians and pharmacists are earnestly invited to co-operate in this survey. Write for questionnaire and return it before December 31, 1929, to the Chairman of the U. S. P. X. Committee of Revision, E. Fullerton Cook, 636 South Franklin Square, Philadelphia, Pa.

At a recent meeting of the American College of Surgeons at Chicago the following Arkansas hospitals were fully approved by the committee on hospital standardization:

Baptist State Hospital, Little Rock General Hospital, Missouri Pacific Hospital, St. Vincent's Infirmary and Trinity Hospital of Little Rock; Fayetteville City Hospital, Fayetteville; St. Edward's Mercy Hospital and Sparks Memorial Hospital of Fort Smith, Leo N. Levi Memorial Hospital, St. Joseph's Hospital, Army and Navy Hospital of Hot Springs; St. Bernard's Hospital of Jonesboro; United States Veteran's Hospital of North Little Rock; Michael Meagher Memorial Hospital and St. Louis Southwestern Hospital of Texarkana.

Hospitals conditioned were: Henry C. Rosamond Memorial Hospital and Warner Brown Hospital of El Dorado; St. John's Hospital of Fort Smith; Helena Hospital of Helena. The Arkansas Children's Hospital of Little Rock is approved conditionally.

Among the Arkansas physicians present at this annual meeting of the American College of Surgeons were:

R. J. Caleote, K. W. Cosgrove, Dewell Gann, Jr., H. Fay H. Jones, R. B. Moore, W. R. Richardson, J. H. Sanderlin, J. T. Shuffield,

W. F. Smith, Wm. A. Snodgrass, and Wm. A. Snodgrass, Jr., of Little Rock; G. E. Cannon, Hope; M. V. Russell, El Dorado; J. M. Smith and T. F. Kittlee of Texarkana; W. V. Laws, Hot Springs; E. F. Ellis, Fayetteville; W. H. Moek, Prairie Grove; H. H. Niehuss, El Dorado.

MEMORIAL

Woman's Auxiliary of the Arkansas Medical Society

For the first time since the organization of the Woman's Auxiliary to the Independence County Medical Society we are called to mourn the loss of one of our beloved members, Mary Case Craig, wife of Dr. Stark Craig. On August 27, 1929 her gentle soul passed quietly into light and peace.

Beloved by a devoted family and a large circle of friends, useful in the work of her church and the organizations of which she was an active member, faithful in every thing, she will be greatly missed, but like the Apostle of old she could say, "I know in whom I have believed and am persuaded that he is able to keep that which I have committed unto Him."

Whereas, God has called her and her work here is finished.

Therefore, Be it Resolved by the Woman's Auxiliary of the Independence County Medical Society:

First, that in her death we have lost one of our most beloved members who was always loyal and helpful in her association with us.

Second, that we will miss her presence and help, and while she has gone from us for a little while, she has left us an example of Christian faith and fortitude that will ever be an inspiration.

Third, that these resolutions be spread on the minutes of our Record Book and a copy be sent the bereaved family, the Daily Guard and to the Chairman of Memorial Committee, Mrs. D. A. Rhinehart, Little Rock, Ark.

October 14, 1929.

Mrs. O. J. T. Johnston,
Mrs. C. G. Hinkle.

County Societies

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The Mississippi County Medical Society met at Manila, Tuesday, September 8. The meet-

ing was preceded by a dinner, served in the dining room of the Methodist Church.

Present: A. E. and H. D. Robinson, M. E. Staudenmayer, Leachville; J. A. Luckett, Dell; E. V. Hill, J. A. Saliba, C. E. Wilson, J. R. McDaniel, F. D. Smith, Blytheville; W. P. Hutchins, V. R. Fox, G. M. Denton, P. D. Wesson, Manila.

Drs. J. T. Altman and P. W. Lutterloh of Jonesboro were visitors.

V. R. Fox, H. D. Robinson and W. P. Hutchins were elected to membership.

Book Reviews

Addresses on Surgical Subjects.—By Sir Berkeley Moynihan, Bart., President of the Royal College of Surgeons of England. Octavo of 348 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, \$6.00 net.

The subjects discussed in this group of addresses are as follows:

The Hunterian Oration—Hunter's Ideals and Lister's Practice.

The Harveian Oration—Before and After Operation.

The Murphy Oration—John B. Murphy—Surgeon.

The Debt of Pure Science to Medicine.

The Mackenzie Davidson Lecture—The Relationship of Radiology and Surgery.

The Hastings Lecture—Cancer and How to Fight It.

The Contributions of Leeds to Surgery.

Lister as a Surgeon.

The Approach to Surgery.

Lister—Benefactor of Mankind.

Perforation of Gastric and Duodenal Ulcers.

Relation Aberrant Mental States to Organic Disease.

Acute Pancreatitis.

The Mitchell Banks Lecture—The Gall-Bladder and Its Infections.

Gonococcal Urethritis in the Male, for Practitioners.—By P. S. Pelouze, M. D., Associate in Urology and Assistant Genito-Urinary Surgeon at the University of Pennsylvania. Octavo volume of 357 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, \$5.00.

This book is just a simple story of the subject and not to be considered a text-book upon gonorrhea. The discussions are arranged so as to be easily understood, with a good plan of treatment and what to expect of it. It closes with an analysis of case histories.

A Text-Book of Surgery.—By W. Wayne Babcock, M. D., F. A. C. S., Professor of Surgery and of Clinical Surgery in the Temple University, Philadelphia; Surgeon to the Samaritan Hospital and to the American Hospital for Diseases of the Stomach. Octavo of 1,367 pages with 1,050 illustrations, 9 of them in colors. Published by W. B. Saunders Company. Cloth, \$10.00 net.

This well-known teacher of surgery has written this book in a dogmatic vein; what practice and study have made him believe is true today. It standardizes approved practice. The 1,313 pages are divided into 58 chapters, with over one thousand illustrations.

Physical Examination and Diagnostic Anatomy.—By Charles B. Slade, M. D., formerly Chief of Clinic in General Medicine, University and Bellevue Hospital Medical School, New York. Fourth Edition, thoroughly revised. 12mo of 196 pages with 43 illustrations. Published by W. B. Saunders Company, Philadelphia, 1929. Cloth, \$2.00 net.

This book gives the technic, fundamental methods and principles on Physical Examination. To enhance the value, as a source of quick and easy reference, this volume presents for the first time an Appendix, covering the Physical Signs in the Diagnosis of Pulmonary Tuberculosis.

An Introduction to Experimental Pharmacology—By Torald Sollmann, M. D., Professor of Pharmacology and Materia Medica at Western Reserve University, Cleveland, and Paul J. Hanzlik, M. D., Professor of Pharmacology at Stanford University, San Francisco, California. Octavo volume of 321 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, \$4.25 net.

Part one of this book is devoted to chemical pharmacology and Part two, to experimental pharmacodynamics. The latter has been grouped by the various organs or functions, to articulate with the students experience in physiology and pathology.

A Text-Book of Pathology—By William G. MacCallum, M. D., Professor of Pathology and Bacteriology, Johns Hopkins University. Fourth edition, thoroughly revised. Octavo volume of 1,177 pages with 606 original illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, \$10.00 net.

This book comes from a very able authority who discusses disease as far as possible upon the basis of etiology. Also of the disturbances of function and of chemical interchange in the course of disease, and even describes symptoms.

Membership Roster of the Arkansas Medical Society for 1929

ARKANSAS COUNTY

Dickens, Homer	DeWitt
Drennen, S. A.	Stuttgart
Fowler, Arthur	Humphrey
Henry, C. A.	DeWitt
John, M. C.	Stuttgart
Lowe, W. W.	Gillett
Neighbors, J. E.	Stuttgart
Park, Chas. E.	DeWitt
Rasco, C. W.	DeWitt
Riley, H. C.	Bayou Meto
Strait, C. W.	Stuttgart
Swindler, E. B.	Stuttgart
Whitehead, R. H.	Gillett
Winkler, E. H.	DeWitt
Word, J. F.	St. Charles

ASHLEY COUNTY

Barnes, L. C.	Hamburg
Cockerham, H. E.	Portland
Cone, A. E.	Portland
Crandall, M. C.	Wilmot
Fletcher, G. W.	Montrose
Houston, M. F.	Hamburg
Jones, Wm. Ernest	Wilmot
Norman, W. S.	Hamburg
Parker, J. L.	Snyder
Setzler, G. H.	Crossett
Simpson, J. W.	Hamburg
Smith, M. L.	Fountain Hill
Spivey, C. E.	Crossett
White, E. O.	Crossett
Wood, J. T.	Crossett

BAXTER COUNTY

Appleby, Scott	Cotter
Morrow, J. J.	Cotter
Tipton, J. T.	Mountain Home
Tipton, W. C.	Colony, Okla.

BENTON COUNTY

Atkinson, R. M.	Bentonville
Buffington, G. H.	Decatur
Clemmer, J. L.	Gentry
Cox, W. T.	Gentry
Crockett, C. S.	Lincoln
Curry, W. J.	Rogers
Duckworth, F. M.	Siloam Springs
Duncan, M. W.	Centerton
Eubanks, F. G.	Decatur
Greene, L. O.	Pea Ridge
Gulledge, Jno. F.	Siloam Springs
Harrison, A. J.	Lowell
Highfill, E. J.	Cave Springs
Hodges, Guy	Rogers
Horton, C. W.	Hiwassee
Hughes, J. A.	Siloam Springs
Hurley, C. E.	Bentonville
*Irland, W. W.	Gentry
Koobs, H. J. G.	Rogers
Lindsey, J. H.	Bentonville
Love, Geo. M.	Rogers
McNeil, Clyde L.	Rogers
Montgomery, Chas. C.	Kansas City, Mo.
Moore, W. A.	Rogers
Pickens, W. A.	Bentonville
Powell, J. T.	Gravette
Ramsey, T. C.	Gentry
Scott, L. L.	Siloam Springs
Smiley, J. L.	Siloam Springs
Steele, R. W.	Hot Springs
Thompson, J. S.	Gravette
Wilson, C. S.	Gentry

BOONE COUNTY

Blackwood, J. C.	Harrison
Brand, W. M.	Lead Hill
Evans, D. E.	Harrison
Fowler, J. H.	Harrison
Fowler, T. P.	Harrison
Gladden, J. G.	Western Grove
Jackson, G. I.	Harrison
Johnson, J. J.	Harrison
Kirby, F. B.	Harrison
McCurry, D. K.	Alpena Pass
Owens, D. L.	Harrison
Poynor, Wm. H.	Harrison
Routh, C. M.	Harrison
Watkins, W. L.	Alpena Pass
Weast, L. M.	Yellville

BRADLEY COUNTY

Crow, M. T.	Warren
Ellison, Leroy E.	Warren
Fike, W. T.	Warren
Ganaway, C. E.	Warren
Hartsell, W. L.	Warren
Johnson, R. L.	New Edinburg
Martin, C. N.	Warren
Martin, Rufus	Warren
Reasons, W. B.	Hermitage
Sheriff, J. P.	Pine Bluff
Wilson, Geo. L.	Banks

CALHOUN COUNTY

Jones, E. T.	Hampton
Rhine, T. E.	Thornton

CARROLL COUNTY

Bohannon, J. H.	Berryville
Butt, Wm. Alvin	Green Forest
Carter, A. L.	Berryville
Donaldson, C. W.	Green Forest
Huntington, R. H.	Eureka Springs
John, J. F.	Eureka Springs
Pace, Henry	Eureka Springs
Ponder, J. R.	Eureka Springs
Webb, J. H.	Eureka Springs

CHICOT COUNTY

Baker, E.	Dermott
Barlow, E. E.	Dermott
Blanks, J. T.	Dermott
Burge, John H.	Lake Village
Clark, B. C.	Lake Village
Craig, W. A.	Eudora
Douglas, S. W.	Eudora
Easterling, Walter D.	Lake Village
Easterling, W. W.	Eudora
Henry, R. N.	Lake Village
McGehee, E. P.	Lake Village
Thompson, J. A.	Dermott
Wilson, J. S.	Lake Village

CLARK COUNTY

Alford, J. E.	Okolona
Bremer, J. P.	Point Cedar
Carter, E. E.	Arkadelphia
Doane, S. N.	Arkadelphia
Doughty, D. A.	Amity
Hughes, F. A.	Okolona
Kirby, D. W.	Gurdon
Kirkham, Z. L.	Okolona
McLain, J. T.	Gurdon
Moore, J. S.	Arkadelphia
Moore, W. M.	Arkadelphia
Purtell, C. C.	Graysonia
Ross, H. A.	Arkadelphia
Rowland, W. T.	Arkadelphia
Steed, C. J.	Gurdon
Townsend, Chas. K.	Arkadelphia
Townsend, N. R.	Arkadelphia
Wallis, C. R.	Arkadelphia
Wright, Chas. E.	Gurdon

CLAY COUNTY

Cunning, I. H.	Knobel
Hiller, J. P.	Pollard
Jones, F. H.	Piggott
Latimer, N. J.	Corning
Lunt, J. P.	Rector
McGuire, J. E.	Piggott
Newkirk, C. H.	Corning
Pfeiffer, E. M.	Corning
Poole, W. I.	St. Francis
Richardson, M. C.	Datto
Walker, J. F.	El Dorado

CLEBURNE COUNTY

Hall, H. J.	Higden
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CLEVELAND COUNTY

Carter, John D.	Rison
Ellis, W. S.	New Edinburg
Hamilton, A. J.	Rison
Harris, Sidney	Herbine
Wilson, H. O.	Rison

COLUMBIA COUNTY

Baker, J. J.	Magnolia
Carrington, H. K.	Magnolia
Cooksey, W. P.	Magnolia
Horn, W. H.	Taylor
Hudnall, E. T.	Taylor
Hunt, Wm. J.	Magnolia
Jones, T. H.	Magnolia
Jordan, T. S.	Taylor
Kitchens, H. M.	Waldo
McLeod, G. F.	Magnolia
McWilliams, C. T.	Magnolia
Smith, P. M.	Magnolia
Sauter, Thos. E.	McNeil
Souter, A. J.	Waldo
Walker, J. C.	R. I. Emerson

CONWAY COUNTY

Bradley, A. R.	Morrilton
Bearden, Fred	Alexandria, La.
Bruce, W. H.	Morrilton
Burgess, T. E.	Mountain Pine
Close, E.	Jerusalem
Colay, Jno. H.	Cleveland
Goatcher, A. L.	Plumerville
Hardison, T. W.	Morrilton
Halbrook, J. F.	Plumerville
Holloway, W. R.	Center Ridge
Jackson, J. H.	Springfield
Jones, R. A.	Perry
Jones, Wm. Edgar	Morrilton
Logan, B. C.	Morrilton
McMahan, John Stephen	Clinton
Matthews, E. L.	Morrilton
Matthews, J. M.	Morrilton
Mobley, H. E.	Morrilton
Rieff, W. L.	Perryville
Stephens, A. H.	Casa

CRAIGHEAD COUNTY

Alcott, Geo. B.	Weiner
Altman, J. T.	Jonesboro
Baird, J. L.	Marked Tree
Barrett, R. M.	Black Oak
Bates, Chas. A.	Lake City
Burge, H. G.	Nettleton
Burns, R. B.	Jonesboro
Cohen, O. T.	Jonesboro
Cothern, Thad	Jonesboro
Ellis, Ira W.	Monette
Elders, J. W.	Harrisburg
Hafford, J. C.	Black Oak
Haltom, W. C.	Jonesboro
Handley, E. L.	Sycamore, Ala.
Harrison, B. F.	Truman
Hartwig, C. D.	Lake City
Henderson, A. G.	Jonesboro
Horner, E. J.	Jonesboro
Howell, J. C.	Nettleton
Hunn, J. T.	Harrisburg
Jackson, W. W.	Jonesboro
Jernigan, Roscoe M.	Jonesboro
Lutterloh, Chas. H.	Jonesboro
Lutterloh, P. W.	Jonesboro
McAdams, H. H.	Jonesboro
McCracken, C. P.	Jonesboro
McCurry, John H.	Cash
McDaniel, L. H.	Tyrone
*Moreland, S. W.	Jonesboro
Moreland, W. H.	Tyrone
Nisbett, Frank	Brookland
Overstreet, W. C.	Jonesboro
Ramsey, J. W.	Jonesboro
Ratliff, R. W.	Jonesboro
Reagan, C. H.	Lake City
Roberts, Fred	Lake City
Scott, A. G.	Jonesboro
Sloan, Ralph M.	Jonesboro
Smith, W. H.	Bono
Stroud, H. A.	Jonesboro
Thorn, W. T.	Monette
Tullos, A. M.	Trumann
Verser, W. W.	Harrisburg
Walker, B. F.	Jonesboro
Willett, R. H.	Jonesboro

CRAWFORD COUNTY

Bennett, B. L.	R. F. D. Van Buren
Blakemore, J. E.	Van Buren
Bourland, O. M.	Van Buren
Crigger, J. R.	Alma
Dibrell, M. S.	Van Buren
Galloway, Q. R.	Van Buren
Grant, S. C.	Mulberry
Kirksey, O. J.	Mulberry

*Deceased.

CRAWFORD COUNTY—Continued

Mitchell, T. M.	Rudy
Reves, Wm. R.	Alma
Savery, H. W.	Van Buren
Stewart, Jno. M.	Van Buren
Trice, J. B.	Van Buren
Wigley, J. A.	Mulberry

CRITTENDEN COUNTY

Hare, T. S.	Crawfordsville
Henry, Hugh B.	Aspinwall, Pa.
Irby, J. S.	Earl
McVay, L. C.	Marion
Parker, A. C.	Clarkedale
Reed, F. M.	Turrell
Stevenson, B. M.	Memphis, Tenn.
Watson, H. S.	Earl

CROSS COUNTY

Barner, W. B.	Wynne
Griffin, J. L.	Vanndale
Longest, Ruffin	Wynne
McKie, J. D.	Wynne
McKie, W. H.	Wynne
Miller, J. S.	Parkin
Scott, Chas.	Wynne
Stewart, Thos. J.	Wynne
Wilson, Thos.	Wynne

DALLAS COUNTY

Atkinson, H. H.	Fordyce
Cheatham, H. A.	Princeton
Stewart, A. M.	Manning
Taylor, J. E. M.	Sparkman
Ward, W. P.	Fordyce
Wilson, J. F.	Dalark

DESHA COUNTY

Biscoe, Gibbs	Dumas
Chenault, J. C.	McGehee
Colquitt, S. M.	Beulah, Miss.
DeClark, W. H.	McGehee
Grayson, W. B.	McGehee
Isom, A.	Dumas
Kimbro, C. H.	Tillar
MacCammon, Vernon	Arkansas City
Miller, J. C.	McGehee
Smith, H. T.	McGehee
Watts, J. D.	Dumas
White, R. F.	McGehee

DREW COUNTY

Collins, A. S. J.	Monticello
Cotham, E. R.	Monticello
Duckworth, F. L.	Monticello
Gates, S. M.	Monticello
Kimbro, S. O.	Monticello
Lisenbee, A. M.	Sparkman
Pope, M. Y.	Monticello
Smith, R. N.	Collins

FAULKNER COUNTY

Brooks, H. C.	Conway
Burnett, M. C.	Wooster
Cook, Raymond C.	Atlanta, Ga.
Cureton, H. E.	Conway
Dawson, R. L.	Wooster
DeJarnett, J. W.	Conway
Dickerson, C. H.	Conway
Downs, J. H.	Vilonia
Dunaway, L. S.	Conway
Fraser, N. E.	Conway
Hardy, H. B.	Greenbrier
Harrod, George	Conway
Henderson, G. L.	Conway
*Huddleston, G. D.	Conway
Ingram, E. M.	Enola
Kitley, J. R.	Mayflower
Lieblong, J. S.	Greenbrier
Mabry, Thos.	Holland
McCollum, I. N.	Conway
McDonald, W. T.	Vilonia
McMahan, J. E.	Conway
Muse, J. M.	Conway
Smith, Marcus T.	Conway
Watson, T. C.	Mount Vernon
Westerfield, J. S.	Conway

FRANKLIN COUNTY

Blackburn, E. W.	Ozark
Bollinger, W. H.	Charleston
Douglass, Thos.	Ozark
Gibbons, W. H.	Ozark
Hansberry, A. J.	Ozark
Mooney, J. D.	Altus
Porter, W. C.	Ozark
Post, J. L.	Altus

*Deceased.

GARLAND COUNTY

Biggs, Orvis	Hot Springs
Black, T. N.	Hot Springs
Blockshare, Wilbur M.	Hot Springs
Brewer, H. W.	Hot Springs
Browne, P. Z.	Hot Springs
Browning, E. R.	Hot Springs
Bruce, G. C.	Amarillo, Texas
Cassada, B. F.	Hot Springs
Chamberlain, Warren	Hot Springs
Chenault, H. C.	Hot Springs
Chesnutt, Jas. H.	Hot Springs
Clardy, Floyd	Hot Springs
Coffey, G. C.	Hot Springs
Collings, H. P.	Hot Springs
Connell, W. H.	Hot Springs
Dake, Chas.	Hot Springs
Deaderick, W. H.	Hot Springs
Diederich, V. P.	Hot Springs
Drennen, Chas. Travis	Hot Springs
Drennen, D. E.	Hot Springs
Eckel, G. M.	Hot Springs
Ellis, L. R.	Hot Springs
Ellsworth, E. H.	Hot Springs
Fletcher, Geo. B.	Hot Springs
Garratt, C. E.	Hot Springs
Greene, J. L.	Hot Springs
Hebert, Gaston A.	Hot Springs
Jackson, W. W.	Hot Springs
Jarrell, Foster	Hot Springs
King, Ossian H.	Hot Springs
Klugh, Walter G.	Hot Springs
Knoefel, W. R.	Hot Springs
Lautman, M. F.	Hot Springs
Laws, W. V.	Hot Springs
Lee, D. C.	Hot Springs
McKenzie, E. M.	Hot Springs
McLane, J. N.	Hot Springs
MacLaughlin, O. L.	Hot Springs
Martin, L. G.	Hot Springs
Merritt, J. F.	Hot Springs
Miller, C. S.	Hot Springs
Minor, J. C.	Hot Springs
Mobbs, Bert	Honolulu, Hawaii
Moss, Chas. S.	Hot Springs
Nims, C. H.	Hot Springs
Parks, Wm. P.	Hot Springs
Pate, C. N.	Hot Springs
Porter, Wm. F.	Hot Springs
Proctor, J. M.	Hot Springs
Purdum, E. A.	Hot Springs
Randolph, J. P.	Hot Springs
Robertson, J. A.	Hot Springs
Rowland, J. F.	Hot Springs
Sanders, T. E.	Hot Springs
Scully, F. J.	Hot Springs
Sharpe, S. B.	Hot Springs
Shaw, J. B.	Hot Springs
Short, Z. N.	Hot Springs
Simpson, W. F.	Hot Springs
Smith, Oliver A.	Hot Springs
Smith, W. K.	Hot Springs
Snider, W. L.	Hot Springs
Steele, S. B.	Hot Springs
Stell, J. S.	Hot Springs
Stough, D. B.	Hot Springs
Strachan, J. B.	Hot Springs
Sullivan, A. G.	Hot Springs
Tarkington, Grayson E.	Hot Springs
Tarleton, F. S.	Hot Springs
Thompson, E. L.	Hot Springs
Thompson, Loyd	Hot Springs
Tribble, A. H.	Hot Springs
Vaughan, P. T.	Hot Springs
Wade, H. King	Hot Springs
Waldrop, J. G.	Hot Springs
Weil, S. D.	Hot Springs
Wenger, O. C.	Hot Springs
Wilkins, J. S.	Hot Springs
Wootton, W. T.	Hot Springs
Wright, Homer K.	Hot Springs

GRANT COUNTY

Cole, C. F.	Sheridan
Hope, O. W.	Sheridan
Kelly, O. R.	Sheridan
Paxton, Robert L.	Sheridan
Sheppard, Irvin	Sheridan

GREENE COUNTY

Blackwood, J. D.	Rt. 2, Jonesboro
Bridges, G. P.	Paragould
Castleberry, F. L.	Paragould
Cohn, George	Piggott
Dillman, James A.	Paragould
Ellington, Edgar	Lake City
Ellington, Walter E.	R. 6, Paragould
Ellis, B. E.	Greenway
Haley, R. J.	Paragould
Haley, Robert, Jr.	Paragould
Hardesty, C. A.	Paragould
Hopkins, G. T.	Paragould
Hudgins, J. J.	Paragould

GREENE COUNTY—Continued

Hutcherson, Robt. L.	Delaplain
Kennedy, E. L.	Marmaduke
Lamb, Jones H.	Paragould
Majors, W. M.	Paragould
Scott, F. M.	Paragould
Self, Scott Mack	Boydsville

HEMPSTEAD COUNTY

Allison, Walter G.	Hope
Cannon, G. E.	Hope
Carrigan, P. B.	Hope
Garner, W. M.	Hope
Gentry, J. E.	McCaskill
Lile, L. M.	Hope
Luck, J. L.	Hope
McDonald, Thos. Lee	Hope
Martindale, Geo. H.	Hope
Martindale, J. G.	Hope
Parker, W. P.	Hope
Robins, Rual, R.	Hope
Robins, Wm. F.	Ozan
Smith, Don	Hope
Weaver, J. H.	Hope

HOT SPRING COUNTY

Bramlitt, E. T.	Malvern
Hodges, W. G.	Malvern
McCray, E. H.	Malvern
Norton, J. M.	Donaldson
Pharr, J. W.	Malvern
Prickett, Chas.	Malvern
Williams, J. M.	Malvern

HOWARD-PIKE COUNTY

Alford, T. F.	Murfreesboro
Anderson, J. B.	Ben Lomond
Dildy, E. V.	Nashville
Gibson, W. M.	Nashville
Gosnell, C. E.	Bingen
Holcombe, J. T.	Mineral Springs
Hopkins, J. S.	Nashville
Lee, Wm. Ridley	Mineral Springs
Roberts, J. L.	Nashville
Stokes, B. S.	Center Point
Toland, W. H.	Nashville

INDEPENDENCE COUNTY

Bone, O. L.	Newark
Craig, M. S.	Batesville
Dorr, R. C.	Batesville
Evans, L. T.	Batesville
Gray, C. C.	Batesville
Gray, E. M.	Evening Shade
Gray, F. A.	Batesville
Haskey, J. M.	Morefield
Hinkle, Chas. G.	Batesville
Hooper, J. M.	Batesville
Jeffrey, Paul H.	Bethesda
Johnston, O. J. T.	Batesville
Kennery, J. H.	Batesville
Laman, G. T.	Cave City
McAdams, V. D.	Cord
Pascoe, V. L.	Newark
Rice, W. A.	Cord
Robertson, S. N.	Sulphur Rock
Rodman, T. N.	Batesville
Smith, Harlin H.	Calico Rock
Sullivan, E. L.	Poughkeepsie
Woods, T. J.	Evening Shade

JACKSON COUNTY

Barr, A. F.	Cherry Valley
Best, A. L.	Newport
Causey, G. A.	Swifton
Elton, A. M.	Newport
Erwin, Ira H.	Newport
Gray, C. R.	Newport
Harris, M. L.	Newport
Ivy, Jno. B.	Tuckerman
Jamison, O. A.	Tuckerman
Justis, S.	Swifton
Kimberlin, K. K.	Tuckerman
Loftin, J. R.	Grubbs
Moore, W. P.	Newport
Morton, R. F.	Swifton
Norris, R. O.	Tuckerman
Owens, M. B.	Amagon
Pierce, W. N.	Tupelo
Slayden, L. T.	Tuckerman
Stallings, Walker E.	Newport
Stephens, G. K.	Newport
Walker, H. O.	Newport
Watson, E. L.	Newport
Wilson, W. F.	Pleasant Plains

JEFFERSON COUNTY

Beard, J. C.	Pine Bluff
Blankenship, W. H.	Pine Bluff
Capel, C. B.	Pine Bluff
Caruthers, C. K.	Pine Bluff
Chavis, W. M.	Pine Bluff
Clark, Oliver Wm.	Pine Bluff
Crump, J. F.	Pine Bluff
Cunningham, T. J.	Pine Bluff
Gill, J. F.	Pine Bluff
Glover, C. A.	Pine Bluff
Gurney, J. O.	Pine Bluff
Hankinson, O. C.	Pine Bluff
Higinbotham, C. J.	Pine Bluff
Hughes, A. A.	Pine Bluff
Jenkins, J. S.	Pine Bluff
John, J. W.	Pine Bluff
Lemons, J. M.	Pine Bluff
Lowe, W. T.	Pine Bluff
Luck, B. D.	Pine Bluff
McMullen, E. C.	Pine Bluff
Palmer, J. T.	Pine Bluff
Pittman, W. G.	Pine Bluff
Power, Paul H.	Pine Bluff
Scales, J. W.	Pine Bluff
Shelton, M. A.	Wabbaseka
Simmons, Walter H.	Pine Bluff
Smith, S. E.	Pine Bluff
Spillyards, J. S.	Pine Bluff
Tankersley, Grace	Pine Bluff
Williams, Harry E.	Pine Bluff
Woods, R. P.	Alzheimer
Woodul, T. W.	Pine Bluff

JOHNSON COUNTY

Barger, M. I.	Lamar
Burgess, M. E.	Pine Ridge, S. D.
Dunman, B. E.	Lamar
Floyd, John	Clarksville
Graves, S. M.	Hagerville
Hardgrave, G. L.	Clarksville
Horner, W. M.	Coal Hill
Hunt, E. C.	Ola
Hunt, E. H.	Clarksville
Hunt, Wm. R.	Clarksville
Kolb, J. S.	Clarksville
Siegel, G. R.	Clarksville
Yates, E. W.	Coal Hill

LAFAYETTE COUNTY

Armstrong, R. L.	Lewisville
Baker, F. E.	Stamps
Hammond, P. L.	Bradley
Jack, J. J.	Stamps
Keith, A. W.	Stamps
McKnight, J. F.	Bradley
Youmans, F. W.	Lewisville

LAWRENCE COUNTY

Allen, Marshall	Walnut Ridge
Ball, C. C.	Ravenden
Guthrie, R. H.	Boston, Mass.
Guthrie, T. C.	Smithville
Hatcher, Wright W.	Imboden
Hughes, J. C.	Hoxie
Land, J. C.	Walnut Ridge
McCarroll, H. R.	Walnut Ridge
Neece, T. C.	Walnut Ridge
Robinson, W. J.	Portia
Stidham, J. H.	Walnut Ridge
Townsend, C. C.	Walnut Ridge
Warren, G. A.	Black Rock
Watkins, Geo. Max	Walnut Ridge

LEE COUNTY

Bean, W. B.	Marianna
Beaty, W. S.	R. 1, Aubrey
Bogart, H. D.	Marianna
Chaffin, C. W.	Moro
Crawford, W. S.	Marianna
Ferrell, S. A.	Brickeys
Hodge, N. C.	Marianna
Lewis, John F.	R. 1, Marianna
McLendon, Mac	Marianna
Russwurm, S. C.	Hughes
Wall, E. D.	Marianna
White, H. L.	Rondo
Williamson, O. L.	Marianna
Wilsford, A. L.	Moro

LINCOLN COUNTY

Corney, R. B.	Little Rock
Dixon, Chas. W.	Gould
McClendon, J. M.	Gould
Ringgold, G. W.	Gould
Thioliere, A. C.	Gould
Wood, G. C.	Grady

LITTLE RIVER COUNTY

Castile, Herman	Texarkana
Heller, H. E.	Foreman
King, Edward R.	Earlsboro, Okla.
Phillips, Paul H.	Ashdown
Ringgold, J. W.	Ashdown
Vaughan, W. E.	Richmond
York, W. W.	Ashdown

LONOKE COUNTY

Beaty, S. S.	England
Benton, T. E.	Lonoke
Bowers, A. L.	Scott
Brewer, John F.	Kerr
Callahan, E. A.	Carlisle
Corn, F. A.	Lonoke
Corn, F. A., Jr.	Little Rock
Crowgey, W. B.	Scott
Cunning, John R.	Lonoke
Cunning, John Ed	Ripley, Tenn.
Harris, Ernest H.	Coy
Kelly, M. D.	Lonoke
Newsom, W. H.	Louann
Scruggs, G. W.	Humnoke
Smith, Harry B.	Keo
Sonhall, S. A.	Stinnett, Texas
Street, H. N.	Lonoke
Thibault, Henry	Scott
Udley, F. E.	Cabot
Ward, O. D.	England
Watson, Asa C.	Seminole, Okla.
Wells, John B.	Scott

MADISON COUNTY

Acree, W. E.	Huntsville
Hill, N. J.	Hindsville
Youngblood, Fred	Huntsville

MILLER COUNTY

Beck, E. L.	Texarkana
Cargile, C. H.	Texarkana
Collom, S. A.	Texarkana
Dale, J. R. Jr.	Carrigan, Tex.
Dale, R. R.	Texarkana
Fuller, T. E.	Texarkana
Gardner, W. P.	Texarkana
Hibbetts, Wm.	Texarkana
Hunt, Preston	Texarkana
Kelly, K. M.	Texarkana
Kirkpatrick, R. R.	Texarkana
Kittrell, T. F.	Texarkana
Kosminsky, L. J.	Texarkana
Lanier, L. H.	Texarkana
Laws, C. S.	Texarkana
Lee, A. G.	Texarkana
Lennard, F. M.	Texarkana
Longino, H. E.	Texarkana
Mann, A. H.	Texarkana
Mann, R. H. T.	Texarkana
Middleton, B. C.	Texarkana
Murry, H. E.	Texarkana
Portwood, O. F.	Senton, Texas
Robison, Jas. Travis	Texarkana
Smiley, H. H.	Texarkana
Smith, C. A.	Texarkana
Smith, J. K.	Texarkana
Webster, H. R.	Texarkana
Williams, J. T.	Texarkana

MISSISSIPPI COUNTY

Barksdale, Oscar	Wilson
Campbell, J. H.	Joiner
Crawford, H. F.	Memphis, Tenn.
Ellis, N. B.	Wilson
Fox, V. R.	Manila
Grimmett, W. A.	Blytheville
Harwell, C. M.	Osceola
Hill, E. V.	Blytheville
Hosey, N. R.	Joiner
Howton, O.	Luxora
Hudson, T. F.	Luxora
Husbands, F. L.	Blytheville
Hutchins, W. P.	Manila
Johnson, I. R.	Blytheville
Lockett, J. A.	Dell
McCall, W. S.	Blytheville
McDaniel, John, R. Jr.	Blytheville
Masey, L. D.	Osceola
Owen, Wm. M.	Armored
Polk, J. T.	Keiser
Robinson, H. D.	Leachville
Saliba, J. A.	Blytheville
Sheddard, W. J.	Osceola
Sims, H. C.	Burdette
Smith, F. D.	Blytheville
Stevens, C. C.	Blytheville
Tidwell, J. L.	Drew, Miss.
Tipton, Paul L.	Blytheville
Washburn, A. M.	Blytheville

MONROE COUNTY

Boswell, W. L.	Clarendon
Bradford, T. B.	Toone, Tenn.
Bradley, W. T.	Blackton
Dunklin, A. J.	Clarendon
Gilbrech, Arthur H.	Clarendon
McKnight, C. H.	Brinkley
McKnight, E. D.	Brinkley
Murphy, F. T.	Brinkley
Murphey, N. E.	Clarendon
Stout, L. H.	Brinkley
Terry, P. E.	Holly Grove

MONTGOMERY COUNTY

Campbell, C. A.	Mauldin
Freeman, W. D.	Mount Ida
McLean, J. H.	Caddo Gap
McLean, J. W.	Caddo Gap
Robbins, J. D.	Oden
Stueart, J. B.	Caddo Gap

NEVADA COUNTY

Buchanan, A. S.	Prescott
Buchanan, G. A.	Prescott
Chastain, J. S.	Prescott
Dickey, A. B.	Prescott
Hesterly, J. B.	Prescott
Hesterly, S. J.	Prescott
Hirst, O. G.	Prescott
McDaniel, Thos. W.	Boughton
Mendenhall, T. J.	Rosston
Nelms, C. F.	Laneburg
Pool, W. B. H.	Bodcaw

OUACHITA COUNTY

Byrd, E. J.	Camden
Early, C. S.	Camden
Jameson, J. B.	Camden
Kennedy, R. C.	Bearden
McGill, S. D.	Camden
McRea, W. T.	Borger, Texas
Partee, Norf G.	Stephens
Powell, B. V.	Camden
Purifoy, W. A.	Chidester
Rinehart, J. S.	Camden
Robins, R. B.	Camden
Rushing, J. L.	Chidester
Sanders, Geo. P.	Stephens
Thompson, H. F.	Bearden
Thompson, J. S.	Stephens
Thompson, S. A.	Stephens
Word, N. S.	Camden
Worthington, W. L.	Camden

PHILLIPS COUNTY

Baker, J. P.	West Helena
Bean, J. W.	Marvell
Brown, E. T.	Lexa
Bruce, W. B.	Marvell
Butts, J. W.	Helena
Cox, Allen E.	Helena
Cox, Aris W.	Helena
Ellis, J. B.	Helena
Eubanks, G. W.	Wabash
Fink, M.	Helena
Henry, Morris	Helena
King, J. A.	Mellwood
King, W. C.	Helena
Kultgen, Edward	Elaine
Nichols, J. W.	Helena
Norton, Earl F.	Marvell
Orr, W. R.	Helena
Rightor, H. H.	Helena
Russwurm, W. C.	Helena
Storm, Geo. R.	West Helena

POLK COUNTY

Hawkins, B. H.	Mena
Hilton, J. G.	Mena
Johnson, C. F.	Hatfield
Lee, F. A.	Vandervoort
McElroy, F. Q.	Mena
Mullins, F. C.	Wicks
Price, P. N.	Vandervoort
* Vandiver, W. C.	Mena
Watkins, P. R.	Mena

POPE COUNTY

Campbell, C. K.	Dover
Campbell, J. M.	Russellville
Cowan, Riley	London
Drummond, H. S.	Russellville
Grave, Chas. C.	Greenville, S. C.
Haney, A. C.	Russellville
Haster, E. J.	Dardanelle
Hoot, Robt.	Russellville
Jones, G. W.	Atkins

* Deceased.

POPE COUNTY—Continued

Linton, A. C.	Hector
Mason, E. C.	Quebeck, Tenn.
Mason, Walter Lee	Atkins
Millard, Roy E.	Dardanelle
Montgomery, W. A.	Atkins
Ross, C. J.	Dover
Scarlett, Wm. P.	Russellville
Smith, L. M.	Russellville
Smith, R. L.	Russellville
Stanford, J. M.	Russellville
Tate, A. B.	Atkins
Truett, Ed.	Dover
Webb, G. C.	Russellville
Williamson, A. B.	Alpin
Yates, G. W.	Scottsville

PRAIRIE COUNTY

Adams, Edward	DeValls Bluff
Crockett, W. H.	Biscoe
Crow, L. M.	Des Arc
Gilliam, J. C.	Des Arc
Lynn, J. R.	Hazen
Parker, Jas.	DeValls Bluff
Parker, Luke	DeValls Bluff
Porter, T. G.	Hazen
Wilson, Jno. G.	Ulm

PULASKI COUNTY

Allen, Hoyt R.	Little Rock
Arkebauer, C. A.	Little Rock
Atkinson, Shelby	North Little Rock
Bailey, W. E.	Little Rock
Barlow, M. J.	North Little Rock
Barrier, L. F.	Little Rock
Bathurst, Wm. R.	Little Rock
Bennett, B. A.	Little Rock
Blakely, R. M.	Little Rock
Bond, S. P.	Little Rock
Brooks, C. M.	Little Rock
Browning, H. W.	Little Rock
Burns, Jos. A.	North Little Rock
Burns, W. M.	North Little Rock
Calcote, R. J.	Little Rock
Caldwell, Robert	Little Rock
Carruth, O. A.	Little Rock
Carruthers, F. W.	Little Rock
Cazort, Alan G.	Little Rock
Cheairs, D. T.	Little Rock
Chesnutt, C. R.	Little Rock
Choate, H. L.	Little Rock
Coon, A. B.	Little Rock
Cosgrove, K. W.	Little Rock
Crawford, J. B.	Little Rock
Crawford, S. R.	Little Rock
Cull, S. T. W.	Little Rock
Cummins, Bryce	Little Rock
Cunningham, J. C.	Little Rock
Daly, M. G.	Little Rock
Daniels, Noble B.	Little Rock
Darnall, R. F.	Little Rock
Davis, E. N.	Little Rock
Davis, J. C.	Little Rock
Day, E. O.	Little Rock
Delaney, J. P.	Little Rock
Dibrell, J. L.	Little Rock
Dibrell, Jno. R.	Little Rock
Dickinson, M. F.	Little Rock
Dishongh, Howard A.	Little Rock
Dunaway, W. C.	Little Rock
Eubanks, R. M.	Little Rock
Fly, T. M.	Little Rock
Freedman, Theo	Little Rock
Freemyer, W. N.	Little Rock
Fulmer, S. C.	Little Rock
Fulmer, P. M.	Little Rock
Gallaher, Geo. A.	Harlingen, Tex.
Gann, Dewell, Jr.	Little Rock
Garrison, C. W.	Little Rock
Gray, A. F.	Little Rock
Gray, Oscar	Little Rock
Gray, W. E.	Little Rock
Gray, Wm. E., Jr.	Little Rock
Hawkins, Martin C.	Little Rock
Harris, R. P.	Little Rock
Hayes, John H.	Little Rock
Higgins, Homer A.	Little Rock
Hinkle, S. B.	Little Rock
Hoge, S. F.	Little Rock
Holmes, G. M.	Little Rock
Howell, A. R.	North Little Rock
Howell, Stacy C.	Little Rock
Howze, H. H.	Little Rock
Hudson, E. M.	Little Rock
Hughens, H. V.	Little Rock
Hurrell, F. E.	Little Rock
Hundling, H. W.	Little Rock
Hyatt, D. T.	Little Rock
Jackson, Geo. F.	Little Rock

PULASKI COUNTY—Continued

Jewell, I. H.	Paris
Jobe, A. L.	Little Rock
Johnston, E. E.	Little Rock
Jones, Granville L.	Little Rock
Jones, H. F. H.	Little Rock
Jones, Horace C.	Little Rock
Jones, I. J.	Little Rock
Jones, J. E.	Little Rock
Jones, W. E.	Little Rock
Judd, O. K.	Little Rock
Junkin, S. P.	R. 4, Little Rock
Kennedy, Jas. Wm.	Philadelphia, Pa.
Kilbury, M. J.	Little Rock
King, Robt. R.	Monticello
Kirby, A. C.	Little Rock
Kirkham, Z. L.	Little Rock
Kory, R. C.	Little Rock
Kriesel, W. A.	Little Rock
Lamb, W. A.	Little Rock
Law, R. A.	Little Rock
Lenow, Jas. H.	Little Rock
Levy, Jerome S.	Little Rock
Lewis, Geo. V.	Little Rock
McAdoo, H. W.	North Little Rock
McCaskill, M. E.	Little Rock
McCormack, G. A.	Little Rock
MacNeill, N. P.	Little Rock
McKinney, A. T.	Little Rock
McRae, W. M.	Little Rock
Mahoney, P. L.	Little Rock
March, C. J.	Fordyce
Matthews, W. M.	Little Rock
May, C. B.	Little Rock
May, W. S.	Little Rock
May, Jno. R.	Roland
Meek, Edward	Little Rock
Melson, Madeline	Little Rock
Melson, O. C.	Little Rock
Miller, W. H.	Little Rock
Moon, C. R.	Little Rock
Moore, R. B.	Little Rock
Murphey, Pat	Little Rock
Oates, Charles E.	Little Rock
O'Connor, F. J.	Little Rock
Ogden, M. D.	Little Rock
Parmley, L. V.	Little Rock
Patterson, R. Q.	Little Rock
Pemberton, E. M.	Little Rock
Pettus, C. S.	Little Rock
Ponder, E. T.	Little Rock
Pryor, R. E.	Little Rock
Reagan, G. W.	Little Rock
Reagan, L. D.	Little Rock
Reed, C. C.	Little Rock
Rhinehart, B. A.	Little Rock
Rhinehart, D. A.	Little Rock
Richardson, W. R.	Little Rock
Riegler, N. W.	Little Rock
Robinson, F. C.	Little Rock
Roe, Joseph	Little Rock
Runyan, J. P.	Little Rock
Sadler, W. L.	Little Rock
Sanderlin, J. H.	Little Rock
Saxon, R. L.	Little Rock
Scarborough, J. I.	Little Rock
Scott, Homer	Little Rock
Shearer, W. F.	Little Rock
Sheppard, J. P.	Little Rock
Shipp, A. C.	Little Rock
Shuffield, Jos.	Little Rock
Smith, Morgan	Little Rock
Smith, Randolph T.	Little Rock
Smith, W. F.	Little Rock
Snodgrass, W. A.	Little Rock
Spitzberg, Irving J.	Little Rock
Stover, A. R.	Little Rock
Strauss, A. W.	Little Rock
Summers, J. A.	North Little Rock
Switzer, D. M.	North Little Rock
Tenzel Pauline	Little Rock
Thatcher, Harvey S.	Little Rock
Thomas, P. E., Jr.	Little Rock
Thompson, G. D.	Little Rock
Vaughan, Milton	Little Rock
Villars, H. F.	North Little Rock
Vinsonhaler, Frank	Little Rock
Walt, D. C.	Little Rock
Wassell, C. McA.	Columbia, La.
Watkins, Anderson	Little Rock
Watkins, John G.	Little Rock
Wayman, A. K.	Little Rock
Wayne, J. R.	Little Rock
Wayne, W. D.	Little Rock
Webb, V. T.	Little Rock
Weny, N. F.	Little Rock
White, E. H.	Little Rock
Wilkes, E. H.	Little Rock
Wilson, Paul W.	Huttig
Witt, C. E.	Little Rock
Zell, A. M.	Little Rock

RANDOLPH COUNTY

Bayan, Chas. E.	Pontiac, Mich.
Brown, J. W.	Pocahontas
Carrens, J. S.	Pitman
Hamil, W. E.	Pocahontas
Hughes, W. E.	Pocahontas
Hull, H. B.	Mammoth Springs
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Original Articles

TETANUS*

Report of Two Cases Cured

A. G. HARRISON, M. D., Searcy

I wish to call your attention to the title of my paper "Tetanus, Report of Two Cases Cured," and I wish to call your special attention to that word CURED. When I am credited with having cured diseases I feel that in most instances nature has been robbed of her just dues. I have seen patients recover from pneumonia after having been treated in an almost air-tight room, taking ipecac, squills, aconite, lobelia, veratrum, turpentine and quinine internally, and fly blisters, onion poultices and antiphlogistin jackets applied externally. I have seen patients recover from typhoid fever after having been almost starved for both liquids and nourishment, taking calomel one day, quinine the next and aspirin and coal-tar derivitives to control fever. So when I am treating self limited diseases and my patient recovers I feel quite happy and satisfied with the thought that I did not interfere with "old dame nature's" plans enough to prevent her affecting a cure. There are, however, some diseases which have little or no tendency to spontaneous recovery and tetanus stands out very prominent among them.

Whenever a patient recovers from a true, genuine case of diffuse tetanus it is very evident to my mind that somebody has administered specific medication intelligently, persistently and heroically. I do not believe there has ever been or will ever be a case to recover spontaneously. I have been in the practice of medicine twenty-eight years and have seen more cases of tetanus perhaps than the average country doctor, because when I was a lad a neighbor living on adjoining farms with my

father, died with lock-jaw. I watched that poor fellow from the time he stepped on a rusty nail in the barn lot until he was taken to the cemetery. It made a vivid and lasting impression on my mind and I have availed myself of every opportunity to see cases of tetanus since, whether in my own practice, my neighbors, or in the cities where I chanced to be visiting, and I have seen two cases recover, and two only, and those are the two I am going to report.

I am sorry that I have to make any references whatever. If there was a commonly accepted treatment for the disease, it would not be necessary to do so. While I am sure the medical profession is very generally agreed that the antitetanic serum is the best and most rational treatment, there are divers opinions as to the amount of the specific which should be given and as to the method of administration.

W. J. Stone (J. A. M. A., June 24, 1922, p. 1939) says: "It is important that the full effect of antitoxin should be obtained and this may be accomplished by giving 3,000 to 5,000 units intraspinally, from 10,000 to 20,000 units intravenously at the earliest possible moment after symptoms of tetanus appear. On the following day the intraspinal injection may be repeated. The blood remains strongly antitoxic for several days. On the fourth or fifth day 10,000 units should be given subcutaneously to maintain the antitoxin contents of the blood. If only a small amount of antitoxin, 3,000 to 5,000 units is available it should be given intraspinally." Stone thinks the total amount of antiserum given should approximate 125,000 units; half of which should be given intraspinally. Park and Nicoll advocate the early administration of from 3,000 to 5,000 units intraspinally, repeated in twenty-four hours, and 10,000 to 15,000 units intravenously and 10,000 to 15,000 units subcutaneously three or four days later to continue the antitoxin affect.

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

These authors have expressed the opinion that no advantage is gained by giving larger doses. The late Dr. A. J. Ochsner in commenting on this says emphasis should be placed on the benefit following intraspinal treatment. On the other hand J. M. Wainright (*Archives of Surgery*, May, 1926), asserts intraspinal injections of serum should be abandoned since they are harmful and raise the death rate. Four cases successfully treated by S. O. Freeland (*Annals of Surgery*, March, 1927) with large doses of serum intravenously were cited, the amounts were 188,000, 189,000, 213,000 and 755,000 units respectively.

I might consume the rest of the time allotted me citing the opinions of different authors and hardly any two of them would coincide, however, the above are quite sufficient to protect me from a vicious onslaught by the more conservative, even had my patients died, after receiving such enormous doses both intravenously and intraspinally.

Case No. 1. On June the 8th, 1927, W. H. Carter, about 22 years of age, was brought to the Wakenight Sanatorium with a deep lacerated wound on the left shoulder which had been produced by barbed wire six days previously. Dr. Clark of Bald Knob had seen him a short time after the accident, had cauterized the laceration with iodine, dressed the wound aseptically and left it open. On the 8th day of June, Dr. Clark was again called and made a diagnosis of tetanus. He immediately gave the patient 1,500 units of antitoxin subcutaneously and rushed him to the hospital. When he arrived, his teeth were clinched till you could hardly have gotten a knife blade between them, head was drawn far back towards the affected side, all muscles were in a toxic state of contraction, extremely nervous and excitable, was threatened with convulsions by the slightest noise or touch, T. 102, P. 130. One-half grain of morphin was given hypodermatically, and after the father had been advised of the dangers of the heroic treatment proposed, all the antitetanic serum in town was ordered. 20,000 units were given intravenously and followed immediately by 20,000 intraspinally. This procedure was repeated every day for five successive days. In the meantime, no other treatment was attempted except chloretone in thirty grain doses per rectum to control convulsions. On the morning of the sixth day, I was much pleased to find the patient smoking a cigarette and

playing hands with a fascinating brunette. On the seventh day, he was given 20,000 units subcutaneously and 10,000 were administered in a similar manner on the ninth and eleventh days. To recapitulate: the patient had 100,000 units intravenously, 100,000 intraspinally and 41,500 subcutaneously, making a grand total of 241,500 units. There has been no untoward or deleterious effects up to the present time.

Case No. 2. I was called on the morning of November 7, 1928, to see Frank Anderson, a farmer's son, living about fifteen miles from Searcy, over the worst roads in the world. I found a nineteen year old boy in a state of opisthotonos, typical risus sardonius, trismus and all the other symptoms of tetanus, T. 103, P. 140. He gave a history of having rubbed his foot, wearing a pair of Sunday shoes. After going home from church, he put on a pair of gum boots to do the milking and feeding. On the following Saturday, he complained of being sore and stiff and seemed irritable. Sunday the condition was getting worse and a physician was called. A diagnosis of malaria was made and calomel and quinine begun. On Tuesday, another physician was called who told the family he did not know what was wrong and advised more consultation. Wednesday morning, a Ford was sent in for me. After questioning the driver, I had a faint suspicion that the boy might have tetanus and took 1,500 units of antitoxin with me. A hypodermic of morphin, $\frac{1}{4}$ -grain was given, followed by the 1,500 units of antitoxin intramuscular. I returned to Searcy and armed myself with 40,000 units of antitoxin and garnered some reinforcements in the way of a red headed nurse and health officer and returned to the scene of the tragedy. Upon my arrival, I found the boy's condition unimproved except for having rested an hour or two from the morphin. I gave him 20,000 units of antitoxin intravenously and intended giving the same amount intraspinally, but the hands of the nurse and health officer got mixed up in some unexplainable way and about half the contents of the syringe was wasted before it got to the needle which I had introduced into the spinal canal. At the least calculations, 10,000 units were given intraspinally. Then, the site of the wound, which was hard to find, was excised with a very sharp knife and 3,000 units of antitoxin were injected into the surrounding tissues. The wound was left open and

a light dressing applied and kept wet with S. T. 37. Tablets of $1\frac{1}{2}$ grains of luminol were left, with directions to crush, mix with a teaspoonful of water and give by mouth every four hours while awake. Upon my return the following evening, I found the patient had had an awful day and night, having had as many as seven hard convulsions in an hour. He was given another hypodermic of $\frac{1}{2}$ -grain morphin immediately upon entering the house that he might be relaxed as much as possible by the time we got ready for the antitoxin: 20,000 units were given intravenously and 20,000 units intraspinaly. Orders were left for a continuation of the luminol, and more morphin tablets left to be given in the event of persistent convulsions. Upon my return the following evening, I found the patient very tense, restless and excited. His pulse was too fast for me to count, but the nurse said she counted 160, and a temperature of 103. A hypodermic of $\frac{1}{2}$ -grain morphin was given and followed in twenty minutes by 20,000 units of antitoxin intravenously, and this was followed immediately by 20,000 units intraspinaly. I had a great deal of difficulty getting into the spinal canal, owing to the extreme degree of opisthotonos. The spinal fluid came away slowly and was heavily tinged with blood. I was unable to draw off sufficient fluid to equal the volume of the serum, and my heart almost failed me as I forced the antitoxin into the canal rather rapidly and withdrew the needle hurriedly to keep it from being broken off. The patient was seized with a terrific convulsion which lasted thirty minutes, while I sat by and administered chloroform non-sparingly. The room was crowded with neighbors, and I could hear it whispered "well he got him that shot," and "if he was to do one of my folks that way I'd take a hand in the affair etc, etc." After the patient had relaxed, I prepared to leave the house as soon as possible, not knowing how soon an undertaker might be needed. However, I left instructions to continue the luminol and to give ehloroform by inhalation if necessary to control convulsions.

I told the father that I did not know what he might expect, that the boy might be a great deal better, and, on the other hand, he might be dead before morning, but if he was alive the next day and he wanted my services I would be glad to come, with the distinct understanding that I would be permitted to repeat the

previous proceedings, if I deemed it necessary. The following day, about two o'clock in the afternoon, I had a telephone call asking me to come and conveying the information that the patient was a great deal better. I arrived at the home at nine o'clock P. M. and found the boy much improved. My nurse suggested that while we waited for the effect of the customary hypodermic of morphin, before giving the antitoxin, that she give him a bath and change his bed since neither had been done since he was taken sick. She had not been thus occupied but a few minutes until she had the patient chewing gum and the two were engaged in a dialogue that would have made a headliner for the orpheum circuit green with envy. 20,000 units of antitoxin were given intravenously and 10,000 prepared to be given intraspinaly, but the thoughts of my experience the night before and the fact that the boy was so much improved changed my mind and the 10,000 units were given in the median basilic vein in the opposite arm. Two 10,000 unit doses were left for the family physician to give subcutaneously two and four days later. The patient made a complete recovery and is now in the best of health.

CONCLUSIONS

1st. Antitetanic serum is an absolute specific for tetanus if given in time and in sufficient amounts.

2nd. After the toxins have become fixed in the central nervous system, 5,000 units of the specific in the spinal canal is worth more than 20,000 units administered any other way.

3rd. There is no way of telling just how much antitoxin is required to cure a given case, therefore, it is better to give too much than not enough, for the patient may get well after an over dose is given, but is certain to die if the dose is too small.

DISCUSSION

DR. T. F. KITTRELL, Texarkana: I saw a case of tetanus six months ago in the Cotton Belt Hospital, a boy who had been shot in the hand with a blank cartridge. Five days after the injury, a physician saw him and he was beginning to have convulsions. He couldn't separate his teeth. He was given about 15,000 units and sent to the hospital. He got in there in extremis, having convulsions almost continuously. I opened the wound in his hand, took out several pieces of wadding such as come from a blank cartridge. He had been given 15,000 units by a physician in Tyler, Tex. We gave him, in thirty-six hours, 200,000 units of tetanus antitoxin; about 140,000 in the spinal canal and about 60,000 intramuscularly. He grew steadily worse. He got no benefit whatever from

the tetanus antitoxin, and died in 36 hours after he came into the hospital, which was about six and a half days after he received his injury.

I think the shortening of the period of incubation shows the virulence of the infection sometimes, and these cases die much sooner. They get the symptoms quicker. You take cases that incubate in 14 or 15 days, you can do something for them. They get well very much more readily than the ones that have a short incubation.

Another thing, is the amount of the original foreign matter that carries the infection as in this case, where there was a large amount of wadding.

I remember distinctly one of my old teachers saying that he had a case of tetanus that recovered from a pound and a half of potassium bromide. He said he thought he had a specific, but the next six or eight patients that he gave it to died in spite of several pounds that he gave them.

I think tetanus antitoxin is extremely important, and about the only thing that we have to cure it, but it is specially important to give it in all infected, punctured wounds from rusty nails, or contaminated with stable manure or street dust, at the time of injury. I think the preventive treatment of tetanus will do us a lot more good than curative treatment, although some cases get well, as the doctor said. I think he is to be congratulated on getting results.

DR. W. F. SMITH, Little Rock: There are one or two points I would like to comment on in regard to the treatment. I agree with Dr. Harrison that the quick and speedy administration of the antitoxin is of the greatest importance; also the control of the convulsions by luminol, morphin, chloroform, or any way that is possible. It has been our practice, in any wound that comes in contact with the ground, or any wound in which the anaerobic conditions may exist, to give 1,500 units of antitoxin as a prophylaxis. The large dose frequently repeated, I think, is what gave the good results in this case, as in other cases. It has been our good luck, or bad luck, recently to have three cases of gas bacillus infection and in each one of those cases 50 c. c. of the serum was given intravenously and repeated the next day, and then for five or six days after that, 25 cc. were given intravenously. I think it is the large dose, quickly administered, that brings the good results.

DR. F. H. KROCK, Fort Smith: Cases of acute tetanus recover so rarely that I wish to take the liberty of adding to the two cases so ably presented in Dr. Harrison's interesting paper an example which occurred recently in our practice. A twelve year old boy, while chopping wood, had cut his thumb. The flap was replaced and the wound bandaged. Healing was apparently taking place cleanly. On the seventh day, he noticed a stiffness in the muscles of his neck and jaw. This was progressive, and at supper he had great difficulty in chewing his food. He was admitted to St. Johns Hospital at midnight with mild opisthotonos. The wound was opened widely and revealed a dirty greyish base with no evidence of healing. 10,000 units of tetanus antitoxin were given intraspinaly; 20,000 units intravenously; 8,000 units intra-muscularly, making an attempt to deposit the serum around the sheathes of the ulnar and radial nerves of the left arm; and 2,000 units in the region of the wound. This dosage was repeated in eight hours. At the end of the following eight hours, only the intravenous dose of 20,000 units was given, because opisthotonos had progressed to such a stage that lumbar puncture

could not be performed without anesthetization. Any manipulation provoked painful, generalized spasms. On the following day, 20,000 units were given intravenously, and patient appeared improved for the first time. Two days later, a final dose of 5,000 units was given intramuscularly. We found that a proprietary preparation containing one part of gelsemium and three parts of lobelia was more efficacious in relaxing the painful spasms than morphin, chloral or paraldehyde which we had been using. It was given in two cubic centimeter doses, hypodermically, every two hours until some drooping of the eyelids was noted. Convalescence was uneventful except for a moderately severer serum reaction on the seventh day. He was discharged from the hospital on the twentieth day with wound healed but with some stiffness of the muscles of his neck and jaw still present. He received a total dose of 125,000 units of antitoxin.

Chairman Mann: I believe you are the youngest man here that discussed the paper and I personally appreciate it.

DR. SAM J. ALLBRIGHT, Searcy: I do not feel capable of discussing this paper on tetanus, living as I do in the same town with the essayist and knowing something of the difficulties he had to overcome in treating each of these cases. I want to commend him for his perseverance. It would have been so easy for him to say in the first case "This fellow has tetanus, what is the use of my spending all of this money for antitoxin for him." And in the other case, "What is the use of driving over fifteen miles in the country and getting stuck in the mud-hole, when he has tetanus and will die any way." The thing that I want to commend is the doctor's bull-dogged tenacity in staying with it.

DR. DEWELL GANN, SR., Benton: I would like to ask permission to report a case on this same line. A man was working on a building at Benton and he stuck a galvanized wire into his foot. Twenty-one days afterwards he developed tetanus. That is the longest period I have ever had a record of. He was so rigid you could walk up and down on him. I gave him 1,500 units at a time until I had given him 6,000 units before he limbered up. I do not think any doctor should be censured for having a good memory, and this doctor has read somewhere that 1,500 units was the proper dose to give, and he has gone ahead and given it, and I do not think the doctor has any right to censure him for practicing what he read. I just want to report that case. I had better luck with the serum proposition than the other fellow. I made him go to the store and buy it. My work was lost, but I didn't pay for the serum.

DR. D. E. WHITE, El Dorado: I just want to ask a question. Perhaps he can help us out on, and that is whether he thinks 1,500 units of tetanus antitoxin is sufficient as a preventive dose or has he ever had any experience in that line? I have in mind a patient who stuck a nail in his foot one Sunday morning, and that afternoon I gave him 1,500 units of tetanus antitoxin, which I am sure was fresh, and had been kept under proper conditions in the ice box. I also opened the nail wound and iodinated it. One week later, the wound had healed, and about the seventh or eighth morning from this time he called me and said he thought he was taking the mumps. He had gotten up about 6:30 or 7:00 o'clock in the morning and he said he didn't know what to think about it and whether he ought to go to work or not. The first thing that flashed into

my mind was not mumps, but that it was possibly lockjaw. I told him I would come by. He said he didn't think it was hardly necessary. I did, however. He could hardly open his jaws. He said it hurt him when he tried to eat his breakfast a little bit, and he had soreness on each side. I really couldn't tell about any muscular rigidity, but it was more than an ordinary pain and soreness in the region of his jaw and he experienced difficulty in trying to eat. I was immediately alarmed. Knowing that you sometimes get pretty severe serum reactions, I didn't know whether to go to work and give him a whole lot more tetanus antitoxin or just what to do. So I called for consultation and my consultant advised that we go ahead and give some more. We gave him a small dose about every hour, for, I think, five or six doses, and then gave him 20,000 units subcutaneously, and eight or ten hours later he could open his mouth and chew freely and we have had no further trouble with him. It was just simply a case where, I believe, there wasn't sufficient immunity established in the preventive dose that he had at first received.

DR. J. M. LEMONS, Pine Bluff: I enjoyed Dr. Harrison's paper very much. I had some experience along the line he spoke of. I will not attempt to discuss the paper, but I would like to ask him who got up his paper, the first part of it, as he said he didn't use any books but he gave us a great deal of statistics. (Laughter).

PRESIDENT MANN: If we had a State General Hospital or some way to dispense drugs, you probably would be \$300.00 better off.

DR. HARRISON: That's the reason I called the health officer, to ask if there was any way to get the treatment without my standing for it.

PRESIDENT MANN: Our doctors will not stand by and see these people die without money. It is a most commendable thing in the doctor, but they ought not to be called on to do that thing, and I am sure they will not when our people are educated up to that point.

THE STERILIZATION OF INFECTED WOUNDS*

L. VALLETTE PARMLEY, M. D., Little Rock

Infected wounds cause the surgeon more concern, perhaps, than any other class of cases that come under his supervision. A pin scratch on a finger, which at first seems inconsequential, can take on such proportions, within a few hours, as to require a high amputation, due solely to infection. Every surgeon knows this and every surgeon has had a similar unfortunate experience. We say unfortunate because, no matter what precautionary measures he has taken, he knows the patient thinks, in his ignorance, that there is something the surgeon has overlooked. I might add that there are times the surgeon himself thinks the same thing.

All infected wounds cannot be treated in the same manner, for obviously, various types of wounds, location and degrees of severity, demand special procedure. The first thought, of course, is drainage. Regardless of types, or degrees of severity, free drainage forms the first step in the procedure of treatment of *all infected wounds*. Following drainage in this type of cases, alkaline antiseptic wet dressings or wet packs seem to be indicated in a great majority of instances. Naturally, the degree of severity of the wound, as well as of infection, should indicate the kind of solution to be used.

In this connection and for our own convenience in our work, we have classified the degrees of severity of wounds as follows:

A first degree wound is one which involves the various layers of the skin and subcutaneous tissues down to the fascia.

A second degree wound is one which involves the fascia and adjacent structures down to the muscle sheath, or tissues corresponding to the muscle sheath if the wound happens to be located over an area where there is no muscle.

A third degree wound is one which involves the muscle and contiguous structures down to the periosteum or, in the case of the abdomen, the peritoneum.

A fourth degree wound is one which involves the periosteum and the bone itself, peritoneum and the organs of the abdomen, pleura and organs of the chest and the contents of the cerebrospinal cavity.

As stated above, this classification of degrees of severity is of our own devising as we do not recall having seen a similar one. Whether or not it receives your approval, it at least simplifies description between ourselves, and in this respect, if for no other reason, it has proven very satisfactory.

An infection of a first degree wound is usually not serious, even if a rather extensive area is involved. Drainage is, ordinarily, a simple procedure and sterilization is generally accomplished quickly through the medium of wet packs or wet dressings inclosed in oil silk or waxed paper with air vents to prevent eupping and sealing.

Infection of second and third degree wounds, especially of the extremities, are of considerable more concern. Adequate drainage should be provided at once, and such systemic methods instituted as is deemed necessary to prevent the extension of the infection either by the

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blood or lymph streams or by continuity of tissues. Naturally, the indication is for wet dressings or irrigations or both, with a solution of a preparation of high germicidal activity and low toxicity. We mention toxicity because chemical destruction of tissues certainly adds to the seriousness of the condition in hand. Bearing this in mind, we have selected dibromin, a Parke, Davis & Company product, which we will describe later, together with our reasons for the selection.

Infections of fourth degree wounds demand such a variety of treatments that, owing to time limitation, it is impossible of discussion in this paper. Much depends upon location of the wound, type of wound, type of infection, age of patient, whether or not there is a fracture, type of fracture, and extent of the area involved. However, many fourth degree wounds are treated, with a view to sterilization, in the same manner as second and third degree wounds.

As to the age of the patient, it is obvious that we cannot apply wet dressings or wet packs successfully to wounds in infants. They always manage to get at least a part of the dressing in their mouths. In the aged, oft-times, we are forced to center our attention upon the patient rather than upon his wound. We cannot keep him in one position for a lengthy time because of the dangers of hypostatic pneumonia, bed sores, and general irritability of disposition. These things have to be overcome in the manner best suited to the individual case and they often tax the ingenuity and patience of the surgeon.

In reference to location of a wound, it is also obvious that rarely can we apply wet dressings to wounds of the face and head but have to rely upon irrigations and frequent dressings. While irrigations are used in the treatment of infected fourth degree wounds of the abdomen we rely principally upon repair of the organs and free drainage.

The type of wound is often a major factor in deciding upon which of the several methods to be used in combatting the infection. Usually, in punctured wounds, all that is necessary is a strip of iodoform gauze packed loosely into the wound and changed daily. If there is a rather severe infection present, the wound may be irrigated thoroughly from one to three times daily with the aid of a rubber catheter. A catheter is better than an ordinary tube because there are no rough edges to injure

the tissues. The catheter should not be oiled or greased because the substance used will coat the walls of the lumen of the wound or cavity and thus inhibit the action of the solution used.

Incised wounds should be thoroughly drained to the very bottom, regardless of the degree of severity. Wet dressings are usually the dressings of choice. The same may be said for second, third and fourth degree lacerated wounds. Irrigations, after the method advocated and devised by Carrel-Dakin, are most certainly effective, but the Carrel-Dakin technique requires special training and preparation, and for that reason the method is not within reach of most of us. Hospital facilities are almost a paramount requirement for its use.

We have found that dibromin meets our need precisely. It comes, ready for solution, in six-grain capsules, 50 to the bottle, which may be carried in one's pocket if one so desires. The only other requisite is lukewarm water in the amount desired and in thirty seconds the solution is ready. It is a bromin derivative, a white crystalline substance, having a melting point (with decomposition) at about 150 degrees C. It is almost odorless and soluble in water to the extent of between three and four per cent. It is also soluble in ether, alcohol and glycerin, but insoluble in oils. It is stable in the dry form but slowly undergoes decomposition in solution. It holds in a loose chemical combination, about fifty-six per cent of bromin, which, when brought into contact with infected tissues, destroys the bacteria by oxidation. This action is analogous to that of the Chlorine in Carrel-Dakin's Solution and the other chlorinated products. However, laboratory investigations have proven that dibromin is superior to the chlorinated products for general use because of its stability and the minimum requirements for application.

One of the disadvantages of the chlorinated products is the irritation of the skin, mucous membrane and the deeper tissues. Dibromin, in the proper solution, does not irritate these tissues. In more than thirty-five hundred instances, during the four years we have been using the drug in wet dressings and irrigations, we have had only four patients who suffered a mild dermatitis following its protracted use. Another advantage over the chlorinated products, is the fact that dibromin solutions

do not coagulate blood-serum and the tissue albumins. This, of course, adds to its penetrative powers and, therefore, accelerates wound sterilization. I recall that I have often been very pleasantly surprised, when I removed the third or fourth dressing, to find the wound clean with granulation beginning several days before such progress was anticipated.

The manufacturers claim for dibromin that it has a phenol coefficient of 105. That is to say, it is 105 times as active, germicidally, as pure carbolic acid when tested on the typhoid bacillus.

We usually begin our wet dressings with a 1:10,000 solution, using distilled water or sterile rain water, increasing the strength later to a 1:5,000 solution. When the infection is particularly severe and it comes to us late in the process, we use a 1:2,500 solution until we have the situation under control.

Having the normal amount of ego in our personal makeup, we feel that our technique of dressings deserves mention here. We always dress the wound with dry materials and wet them after the bandaging has been completed because it is much easier to fit a dry dressing to the contour of the area affected.

First, a piece of sterile gauze, slightly larger than the wound, is laid over it or packed into it. The object of this is the patient's comfort, for, when the bulky outer dressing is removed, this first layer of gauze usually remains adhered to the wound and may be removed carefully and slowly in case it sticks. Upon this first layer another slightly larger piece of the same material is laid. Upon this second layer of gauze a pad of absorbent cotton is placed so that all of the gauze is hidden. The reason for this is two-fold, viz: Cotton holds the moisture and allows for swelling. Moreover, bacteria do not readily pass through cotton. Then, the entire dressing is enclosed with a bandage. Or, if the wound is located upon the trunk, the cotton layer may be covered by a piece of gauze and held in place by adhesive strips which may be laeed if desired.

If the wound is not of sufficient severity to require hospital attention, the patient or attendant is instructed as to the proper manner of making up the dibromin solution, which may be kept in gallon or half-gallon fruit jars, and to keep the bandage *wet all the time*. Strange as it may seem, the patient, as well as his relatives, really like this method, for it

gives them a real responsibility and something to do for themselves. People are like that!

We do not use dibromin exclusively by any manner of means, but, we do use it where the condition demands quick germicidal activity. Often a mild antiseptic such as a permanganate solution will suffice. Bichloride of mercury solutions and solutions of other equally harmful metallic salts have been completely ruled out in our work for years!

Also, we believe that when a wound has become infected the indication for tincture of iodine, alcohol and the colorful mercurchrome has ceased, for the simple reason that they inhibit the healing process through coagulation of the serous exudate and tissue albumins, causing sloughing. A large third or fourth degree wound with extensive sloughing presents a horrible picture to both the patient and surgeon. With that mental picture before us, we certainly should take every precaution to prevent it.

The differential diagnosis, as to the various forms of wound infection, is not of great importance except insofar as whether or not the pus focus is within reach of surgical attack.

The cellulitis usually accompanying infected wounds nearly always subsides when proper and thorough drainage is instituted. We will not take up the discussion of various forms and methods of drainage because of the great variety of individual preference in this matter. Any type of drainage is good provided it drains the wound thoroughly. In our work, we let the type of wound and degree of severity indicate the method of drainage.

Wound pathology, systemic measures, sedatives, bacterines, serum therapy, etc., are not offered for discussion in this paper because we are dealing only with the infected wound.

Burns have purposely not been mentioned because we regard them as special wounds with a special classification and, therefore, demanding special types of treatment.

DISCUSSION

DR. W. A. SNODGRASS, Little Rock: I would like to endorse Dr. Parmley's paper. A few years ago we dressed all of these wounds with dry dressings, with iodoform and various forms of powder. It was never as satisfactory as wet dressings. It has been about 20 years since they began using wet dressings. I remember about that time in Chicago, where I attended a clinic, they had just discarded the use of the powder and especially iodoform. Everybody was surprised. They thought it would never kill any

germs. All these wounds need is something to absorb the serum or drain out the pus. Draining is the most important thing in connection with treating infected wounds.

DR. BERT L. WARE, Greenwood: When I came out of school I used wet dressings. I never thought of using anything else. But, most of us now concede that the ultraviolet ray is a fairly good agent in the treatment of rickets in children. I have found from experience that the ultraviolet ray on infected wounds is just as useful or more so than it is in rickets. In any wound of first, second, third or fourth degree, use an erythema dose of ultraviolet and you will be surprised at the results.

DR. R. L. SAXON, Little Rock. I do not know that I can add anything to Dr. Parmley's paper. Dr. Parmley was formerly one of our students in the Medical Department of the University of Arkansas at Little Rock and I had the task of looking at him for a couple of years and trying to instill in him some of my experiences. It seems that he has carried with him the energy and pep that he had as a student.

I want to corroborate and maybe explain a little of his idea. Infection, as I understand it, is a physical or chemical substance; that is, you have some material, physical or chemical; bacteria or in chemical compounds injected into the economy some place. When you have an infected wound you have one or both of these agents working, destroying your normal condition or relationship of tissues. When you have an infected area, the first thing that happens, as we see it, before the doctor even knows and before the patient himself knows that this area is affected, the irritation has been made known in the mechanism of the human machine. It has been distributed to many parts other than this area, so the best thing that we can do as an agent, coming on the scene at a later moment, is to study or analyze that area and make an opening to the surface to help nature take care of the infection of this site.

If you will study your pathology at frequent intervals, around that area, you will find by the microscope and by the chemical tests that there is an attempt to confine the disease to this point. There may be weakness at this place or if the poison is injected from the outside there is an overcharge of it; too much to be liquified, distributed or neutralized. So it behooves us, as agents from the outside, to make an opening from the outside to help the fighting forces—not one force, but all the forces—that are trying to localize the disease. Open freely, stick in your drainage, put on your wet sterile dressings. It does not make so much difference as to what dressings you put on, so that you keep it moist and sterile and do not have it too strong with the chemical. It does not take a very strong antiseptic to kill most bacteria. The point is to give them a chance to get out. You will find all the phagocytes, fibrous elements, plasma, etc., agents working, laying out a wall or barrier, and if the infection is of long enough standing, it will become an impervious wall. If you leave it alone, you will later find an aseptic pool and your pus will become inert or inactive. Bacteria die and become harmless to the host, so the main thing to do, as the doctor says, is to incise, put in a drain of some kind and keep it wet with an antiseptic dressing.

DR. J. C. CUNNINGHAM, Little Rock: I am afraid from the comments that have been made, that the main part of Dr. Parmley's paper has been missed. The discussion seems to all be along the line of treatment, while from my opinion the most

important part of his paper, and the part that shows considerable originality of thought is his classification.

I have never heard this classification given before and it seems to me that if it were universally adopted it would give us at least a uniform method of classifying and describing traumatic injuries.

L. V. PARMLEY, formerly of Jerome, Arkansas, in response: I thank the gentlemen for their kindness toward my paper.

As to the ultraviolet ray therapy in infected wounds, there is no question in my mind as to the efficacy of light therapy, especially the bacteriocidal bands of the mercury quartz lamp as well as the tonic bands which range above 2,500 Angstrom units, but I had hoped that light therapy would not come into the discussion of this paper because its merits are still questioned in certain quarters where it is not so thoroughly understood. Few of us have ever depended strictly upon light therapy alone in the treatment of infected wounds, and, consequently, we are somewhat skeptical concerning it. However, there is no doubt, but that all forms of physiotherapy has its place in our armament against disease.

I feel that I must make a point for germicides. Naturally, the healing process comes from within, as Dr. Snodgrass says, but infection comes from without, in the very great majority of instances, to say the least. If this be so then I take the stand that we owe it to the patient to attack the infection from without while depending upon those powers from within. The thing to be cautious about is to not interfere chemically with the phagocytic action going on about the wound.

I thank Dr. Cunningham especially for his reference to my classification of degrees of severity of wounds. If you care to accept it I am sure you will find it lends simplicity as well as accuracy to your descriptions. The Medical Services of at least two insurance companies have commented favorably upon it to me.

THE INJECTION TREATMENT OF VARICOSE VEINS

H. II. HOWZE, M. D., Little Rock

Therapeutic venous obstruction is as old as medical literature. It was natural that intentional obliteration of veins should have been first used in the treatment of a condition in which there were present external manifestations of disease in the veins. Hippocrates (1) described a method of obliteration of a varix in which needles were passed into the dilated veins. Paul of Aegina (2), Galen and Celsus described methods of excision of varicose veins, and this operation is said to have been mentioned by Pliny and Plutarchus. The fact that the celebrated Caius Maris submitted to an operation for varicose veins without being bound is recorded as an evidence of his

fortitude. During the past few years, there has been a marked revival of interest in therapeutic venous occlusion by injection of sclerosing substances. It is interesting to note that this method was extensively used and discarded previous to the development of antiseptic surgery. The revival of the injection method is due to the poor results usually obtained by other surgical procedures.

The injection method of treating varicose veins is receiving a considerable amount of attention at this time, both in the medical and the lay press. Nearly all reports speak of it as the remedy *par excellence* for this condition from the standpoint of end results obtained. One of the notable features of this treatment is that the patient may continue his occupation with little discomfort or inconvenience. Furthermore it is not accompanied by the dread of the knife, the anesthetic, post-operative scars, and above all, the hazard of embolism. In this age of short dresses and transparent stockings, this procedure is certainly a boon to womankind, as it leaves no disfiguring scars or other visible deformities.

The injection method is not a cure-all for varicose veins, but in those cases which are suitable for injection, the results are much more favorable than those obtained from surgery. If used in unsuitable cases, disaster may result. In some cases, as in one of my cases, the veins of one leg may be suitable for injection and those of the other leg be unsuitable. So the contra-indications are just as important as the indications for injection. To attempt to destroy a superficial varicosity when the communicating and deep veins are incompetent is but folly and dire results may follow.

CONTRA-INDICATIONS

The contra-indications to sclerosing injections of veins are few yet definite. Some authorities state that 95 per cent of all cases can be safely treated by this method, but this figure is probably high. The following conditions, however, must be taken into account before injections are attempted. First, the general condition of the patient, advanced diabetes, old age accompanied by degeneration of the heart or kidneys are definite contra-indications. Thrombophlebitis, acute or subacute is also a contra-indication; occlusion of the deep veins or lymphatic blockage with marked swelling is likewise a contra-indication. Likewise in cases showing insufficiency of valves

of communicating branches. In this connection we must be guided largely by the Trendelenburg test. Patients suffering from Buerger's disease should not be injected; neither should the varicose veins of a pregnant woman until after delivery, unless the veins are very troublesome.

METHOD OF OBLITERATION

The rationale of the method lies in the production of a chemical irritation of all the coats of the veins, with destruction of the endothelial lining, accompanied by a coagulum and secondary proliferation of fibrous tissue. The coagulum becomes firmly adherent to the vein walls by fibrous tissue cells. This explains the absence of embolism after obliteration. Organization becomes firmly established within a few weeks, and ultimately the injected vein is converted into a fibrous cord. According to Forrestier and Sicard, the chemical inflammation, or reaction, produces a venitis, which is very different from a septic venitis (thrombophlebitis.) Venitis is a localized process which generates a very adherent clot, which does not give rise to oedema or much pain. In phlebitis, there is frequently an extension of inflammation into the deep veins, causing oedema and pain.

CLINICAL TYPES OF VARICOSE VEINS

(1) *Ordinary Varicosities*: These appear in oftentimes otherwise normal limbs and respond readily, oftentimes to a single injection. This is the form best suited for injection by the inexperienced.

(2) *Sacculated Varicosities*: Usually occurring along the trunk of the internal saphenous on leg or thigh. The vein shows bulging, becomes enormously dilated and tortuous. Multiple sacculations produce a deformity resembling a polycystic mass. These enormously dilated veins respond remarkably well to the injection treatment with a considerable diminution in size of the mass.

(3) *Multiple Punctate Varices*: These are located in the intradermal layers. This variety is usually found in middle aged people, in the region of the ankle or foot. They vary in size from pinhead to pea, are dark purplish in color, can be emptied by pressure or stroking. The overlying skin is very thin. Because of their size and superficial location this form is not amenable to injection.

(4) *Cavernous varicose veins or cavernous sinuses*: Which represent an advanced form of varicosity. In these the communicating veins have lost their valves, and a doubly positive Trendelenburg test is present. Sclerosing injections are a failure in this type because the solution enters the deeper circulation.

DIRECTION OF VENOUS FLOW IN VARICOSE VEINS

Studies made by McPheeters and Rice on living subjects confirm the results of Bernstein which he obtained through extensive operative work in the surgical treatment of varicose veins. In early cases of varicose veins of the legs the valves in the saphenous vein may be competent with no reverse flow. In these there is merely a stagnation. These show a negative Trendelenburg test. In moderately advanced cases, the valves have become deficient and the Trendelenburg sign is positive, with the blood flowing downward in the superficial (saphenous) vein and into the deep veins through the communicating veins, the valves of which are still normal. In the advanced cases the valves of the communicating veins are also destroyed and the Trendelenburg sign is doubly positive. This explains clearly how valvular incompetence in the great saphenous (Trendelenburg positive) plus valvular deficiency in the communicating veins (Trendelenburg negative) gives the condition described as Trendelenburg double. In this condition there is a reverse flow from both the superficial and deep system of veins causing a stagnation in the dependent extremity with a saturation of tissues by blood serum. This saturation makes them susceptible to infections and later ulceration, the dreaded end result of varicose veins. McPheeters and Rice believe that in all varicose veins of the lower extremities, the circulation is either stagnant or reversed, and that a chemical induced thrombus is forced *distally* toward the smaller veins, where it is arrested. This accounts for the *rarity* of embolism from the injection method of treatment.

TECHNIC OF INJECTION

The solutions recommended have been legion, among them quinine, sodium chloride, sodium salicylate, dextrose, metaphen, mercuric chloride and invert sugar. Best results will be obtained by using 1 solution constantly. I have had best results with sodium chloride in a 20

or 30 per cent solution. This solution is non-toxic and easily secured. Kern and Angle after a large amount of experimental study have found an ideal solution composed of dextrose, 50 per cent, and sodium chloride 30 per cent. The solution having been selected, in order to obtain the desired results in the shortest time with the least discomfort to the patient, the proper technic of injecting the sclerosing solution is an important factor.

(1) *Syringe and Needles*: A 5 or 10 cc. Luer syringe and 24 or 26 gage rustless steel needles are used. Too much emphasis cannot be placed on having a sharp needle for a successful puncture of the varix.

(2) *Site of Injection*: Where varicosities are limited to the leg, injection is usually begun in the most prominent portion of the varix. Where the varices extend some distance up the thigh injection just below the knee in order to block the main channel. After this is accomplished the varices distally located quickly respond to treatment. Varices in the upper third of the thigh should be injected with caution.

(3) *Position of Patient*: (a) Standing is the least satisfactory position of all, both to the patient and to the operator. It should be used only in those cases where the varix is not prominent enough for injection in any other position. (b) The sitting position is more comfortable to the patient, but not so satisfactory to the operator. With the leg hanging the varix is distended. In using this method best results are obtained by first elevating the leg, allowing the veins to empty, then applying light pressure above the varix while injecting to prevent its distention and consequent dilution of the sclerosing agent. (c) The horizontal is the most satisfactory position of all but, unfortunately cannot be employed in all cases. While the varices are distended, a tourniquet is applied proximal to the site of injection, then the varix is entered and the tourniquet released. The vein quickly empties and the injection is made. The solution is not diluted with blood and comes in intimate contact with the vein wall, which insures thorough destruction of the intima. This is the position I always use, if possible.

(4) *Amount of Solution*: The amount varies according to size, from 2 to 10 cc. being used. It is not safe to inject more than 10 cc. at one sitting.

(5) *Injection*: The skin is sterilized with iodine followed by alcohol. When the needle has entered the varix the plunger is withdrawn slightly until blood enters the syringe, thus making certain that the needle is in the lumen of the vein. Several aspirations of blood during the course of an injection is a safe procedure and will tend to prevent complications caused by escape of sclerosing solution into the surrounding tissues.

After the injection is completed, the needle is quickly withdrawn and pressure applied over the site of injection by means of a gauze sponge. This prevents escape of sclerosing solution at the site of puncture. Then the patient is kept in the prone position for 15 minutes, an elastic bandage applied to the leg. Injections are repeated every 3rd day, if necessary.

CLINICAL EFFECT OF INJECTION

There is usually more or less pain immediately after the injection which may last a few minutes or hours. In no case has pain been severe enough to require an opiate. When the patient returns after 2 or 3 days, palpation reveals slight tenderness along the course of the vein. The vein can be palpated as a firm cord about 1-3 its former size.

Complications: Few or absent if proper preparation is made. Embolism is absent or rare because the direction of flow of blood is distally as explained above. Ulceration around the site of injection may occur if some of the solution is injected outside the veins or if there is a leakage from the site of puncture.

CONCLUSIONS

(1) The injection treatment is far superior to any other form of treatment both from the standpoint of danger and from the standpoint of loss of time.

(2) Contra-indications to this method of treatment are: (a) phlebitis; (b) obstruction of deep veins; (c) arterial disease of extremities (advanced arterio-sclerosis, Raynaud's disease and thrombo-angitis); (d) diabetes; (e) cardiac disease; (f) pregnancy in latter months.

(3) Injections are best made in the horizontal position, if possible.

(4) There is little danger in the treatment if a thorough understanding of vascular conditions is first had. This method is not a cure

all, but must be used in cases meeting certain preliminary requirements.

1. Works of Hippocrates translated by Francis Adams, New York, William Wood and Company Vol. 2, p. 305.

2. Paulus Aegeneta: New Sydenham Series, 1846, Vol. 2, p. 406.

Abstract

TRUTHS ABOUT SERUM DIAGNOSIS OF SYPHILIS

All ten of the propositions which John A. Kolmer, Philadelphia (Journal A. M. A., Nov. 9, 1929), accepts as established truths in the serum diagnosis of syphilis may be briefly summarized as follows: 1. There must be something of real and intrinsic value in the Wassermann reaction and the serum diagnosis of syphilis in general for the subject to have withstood the vicissitudes of twenty-five years of time and remain today one of the most valuable of laboratory tests known to medical science. 2. While the Wassermann, Kahn and other serum reactions in syphilis are biologically nonspecific, they possess an extremely high degree of practical specificity under proper technical conditions. 3. The Wassermann Kahn and all other serum tests are subject to numerous technical errors, and these are almost entirely responsible for falsely positive reactions. 4. Serum tests are indispensable aids in diagnosis. Positive reactions are sometimes the only definite evidences of syphilitic infection and are not infrequently the sole means for detecting syphilis in its chronic and concealed stages. 5. The serum diagnosis of syphilis is best served by employing two or more procedures as a complement fixation and precipitation test of proved merit. 6. The various serum tests for syphilis are not too sensitive, but rather are not sensitive enough. 7. The serum tests for syphilis are worthy of being more widely employed as routine measures in the practice of medicine and surgery and its specialties. 8. Acceptable serum tests are valuable aids in guiding the treatment of syphilis and as criteria of cure, especially quantitative reactions. 9. Positive serum reactions are frequently and usually the first signs of relapsing syphilis following insufficient treatment or no treatment at all. 10. Spinal fluid examinations are now recognized as an important and integral part of the complete diagnosis and treatment of most cases of syphilis.

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Editorial

THE HOLIDAY SEASON

The Christmas holiday season is the one season of the year which has a universal appeal to young and old, and to all sects and races in this great country. The youngsters look forward to the Fourth of July with glee-ful anticipation, thinking of fireworks and noise making. The girls and boys of older growth plan picnics and dances. The old folks care little about the holiday save for the enjoy-ment of seeing their young children enjoy it. Many old folks indeed find only a disturbance which annoys them. Thanksgiving day means a holiday from work and good things to eat—and that's all. Its real significance dating back to the day of the pioneers of America, who were thankful for the good crops and more thankful that the red men had left their hair on their heads throughout the year in- stead of scalping them. These things seldom are remembered, or are regarded as ancient history of little interest to the present gen- eration.

But Christmas is different. As to the other holidays, the anticipation of pleasure is merely a few days in advance, but for Christmas preparations begin months and even a year before. For example, there are Christmas Sav- ings clubs organized by the banks. They begin a month before one Christmas for the holidays of thirteen months in the future! And the de- positors having forethought start their saving money, in many cases, for no reason other than to have money to spend. And that money to spend is not money to be spent on their own selves. It means that the joy of giving is suf- ficient urge to induce them to deny themselves present indulgences, week after week, for a year.

The little children start talking of Santa Claus weeks ahead of his descent of the chim- neys. Just to witness the joy of kidlets on Christmas morn as they discover the Christ- mas tree, all frosted and hung with toys and other gifts, is a supreme joy to parents, un- cles and aunts, grandpa and grandma. That is why Christmas appeals to everybody, young and old alike.

Originally, a pagan festival, celebrating the new birth of the sun after the shortest day,

the holiday date was adopted by Christianity as the birth of Christ. But in the melting pot of all nations and races, the celebration has become universal and jews and gentiles, religious sects and denominations, and those without religious affiliations, all join in the joy of making holiday regardless of creed, nationality or color. It is the one holiday for all the people that the poorest among us are enabled to get the enjoyment of the season which otherwise they would never experience.

The Journal wishes all its readers a happy Christmas and a prosperous New Year.



MEANDERING THROUGH MIAMI

O. C. MELSON, M. D., Little Rock

Miami was the name of a former Indian tribe, and means "people who live on a peninsula." To the physicians and their wives who attended the Southern Medical Association convention last month Miami has a decidedly different significance. To them, it means a beautiful city resting on a coral strand, abounding in delightful sunshine, stately palms, delectable fruits, variegated flowers, superb sea food, excellent bathing beaches, and a thoroughly genuine and gracious hospitality. Primarily this was a scientific assembly, but the aesthetes were not neglected.

One of the most unique bits of entertainment was the turtle steak beach dinner. Turtle steaks may be fried or broiled. They are excellent in either style. This party was exceptionally well attended and when the last strains of the orchestra died away, some of the more musically inclined members suggested "Sweet Ad-o-line."

The first day was taken up with papers and demonstrations by the hosts. Many interesting and instructive cases were presented and discussed and a few movies were shown, too.

Wednesday, the President's general session was held. Twenty-five minute papers representing the various branches of medicine were read. Tinsley Harrison of Nashville fired the opening gun with "Observations Concerning the Nature and Treatment of Cardiac Fatigue." While he was not convinced thoroughly, his belief was that the concentration of potassium salts has a definite part in the production of cardiac fatigue and that fatigue

was a cause of some cases of heart failure. He administered potassium dibasic phosphate in 25 per cent solution, eight cubic centimeters daily in a limited number of cases with some beneficial results.

Percy W. Toombs said that so far as maternal mortality and morbidity were concerned, the profession had advanced little beyond Eve.

Amoss of Durham, North Carolina, was the orator in medicine. His essay was "Poliomyelitis." Among other things he said the permeability of the nasal mucosa may be increased by the use of nasal antiseptics and douches. If this be true, one of our bulwarks of prophylaxis is removed. He advocated the Flexner as against the Rosenow serum and reported the results of the Rockefeller Institute.

"Conservative Gynecology" was Guy L. Hunner's contribution. He also mentioned the Henner ulcer of the bladder and the stricture of the ureter.

The most outstanding scientific contribution was made by Moore and associates of Louisville, Kentucky. He reported two and one-half years' experience with an injection method for ascertaining the cardiac output, the circulation time, and the intra-thoracic blood volume. Primarily an experimental study, Doctor Moore has tested the method in some clinical cases and found it workable. With such a method, new avenues of approach to the problems of the circulation are opened. Perhaps they will soon be paved with additional knowledge.

"The Prognosis and Treatment of Lobar Pneumonia" was the discouraging tale told by Doctor Henry T. Chickering. In spite of extensive research on causes and cures the mortality rate is about 35 per cent. He demonstrated a new portable oxygen chamber retailed by Warren E. Collins of Boston, and advocated the ownership of one by every community.

No doubt many cases of agranulocytic angina have been overlooked. Doctor Rudner's paper was a complete work on the subject and the discussion which followed occupied about half the morning. It gave us food for thought

Millers and Waters of Baltimore movies demonstrated the intravenous method of administering the dye for cholecystography. They were not entirely convincing as to the simplicity of the method for the ordinary doctor but certainly showed its facility in the hands of Doctor Waters.

The paper of Winans of Dallas did not receive the discussion it merited due to the limitation of time and a consequent ruling by the chairman that discussion would be limited to those designated in the program. It is worth reading and gives some valuable therapeutic suggestions.

In the section on gastro-enterology, the Chairman, J. Russell Verbrycke, championed the cause of gastro-enterology as a combined medical and surgical specialty. His idea was both unique and, in many respects, practical. However, there was an undercurrent of opposition, the proponents of which felt that such a combined specialist might not obtain enough work to keep his hand in technically. Judging from Doctor Verbrycke's enthusiasm it has been a distinct advantage to him in his practice. There were two papers in this section on cardio-spasm, the first by Doctor E. B. Freeman of Baltimore on "The Etiology, Pathology and Symptomatology of Cardiospasm," and the second by Doctor Vinson of Rochester, Minn. on the treatment. The first paper dealt clearly with the symptomatology inasmuch as the etiology is still obscured and the pathology has not been studied accurately. Doctor Vinson, in speaking of the treatment, advised the use of dilatation by sounds up to 60 French or by the hydrostatic dilatator. Doctor Vinson based his statistics upon the treatment of six hundred and seventy-five cases. Both of these papers were amply illustrated by lantern slides. I might say that a third paper on this subject was read by Doctor Julius Friedenwald of Baltimore in opening the discussion. Doctor C. H. Heacock of Memphis, reported two interesting cases of diverticula of the thoracic portion of the esophagus. Both of these cases were discovered accidentally, and their clinical significance was not clear. They apparently were of the traction type.

One of the pleasant surprises was the presentation of a preliminary report by Doctor Marvin Smith of Miami, on the occurrence of the ova and larvae of the common house fly in feces. He reported one case, which had been thoroughly studied and from which the adult flies had been recovered by proper cultural methods. Doctor Smith was not prepared to discuss the pathogenicity of the *musca domestica* at this time.

By way of diversion on Wednesday night, after the scientific section had ended, a dance was given at the Coral Gables Country Club. Unlike most dances it was for the eyes rather than for the feet, as it was done mostly by a well-trained chorus—well-trained and good looking. Also, we were royally entertained by some of Miami's songbirds. Prior to this diversion Doctor Thomas W. Moore paid a glowing tribute to Ephraim McDowell in his Presidential address.

In the section on medical education the old controversy of two additional years in college versus two more years of hospital was carried on by W. C. Davison of Duke University. While Doctor Davison's arguments in favor of two years in hospital may be statistically sound for personal satisfaction there can be no argument against addition years of college, and while one may regret a lack of culture no record is available of any one regretting too much. J. H. Musser promulgated some ideas in regard to post-graduate teaching. As can be seen from a perusal of his paper his ideas are practical and desirable.

Arkansas was well represented on the program. Doctor Harvey S. Thatcher of the University of Arkansas Medical School, Department of Pathology, read the preliminary report on pathological changes in the albino rat suffering from vitamin G deficiency written in collaboration with Barnett Sure and D. J. Walter of the University College of Agriculture, in the section on pathology. In the section on bone and joint surgery Doctor F. W. Carruthers of Little Rock, reported one hundred cases of fracture of the neck of the femur. In the section on neurology Doctor Pat Murphy of Little Rock, reported his experiences in the treatment of epilepsy by intravenous oxygen. In the section on gynecology Doctor Dewell Gann, Jr., of Little Rock reported some further studies on the inflammatory lesions of the cervix and in the section on medicine, the writer presented a paper on "Limits of Normal from the Clinicians' Point of View."

This meeting being in the nature of a three or four ring circus made it impossible to visit all sections. It was a wonderful four days from many points of view, scientifically, socially and gastronomically. Neither the Mediterranean fruit fly quarantine nor the national prohibition act dampened the spirits of the meeting.

Abstracts

THE PHYSICIAN'S OBLIGATION

Stanley H. Osborn, Hartford, Conn. (Journal A. M. A., Oct. 26, 1929), asserts that the private physician is the only person who can approach the proposition of public health from a personal and individual standpoint. He may well be called the private in the war on preventable diseases. Each physician in the country may well ask himself the question "Am I doing what I should for the health of my patients in the communities in which I practice medicine?" Physicians not only should be wide awake to the latest developments in the prevention of disease, but should most actively and energetically in private practice seek to do the best they know how for their patients and families. It matters not whether we are in a department of health, in a voluntary health group or private practitioners, when we consider the prevention of disease. Preventive medicine should be foremost in our minds, because it is often the most valuable merchandise the physician can give his patient. Preventive medicine must necessarily be carried out in a more energetic and positive manner than curative medicine. A well person must have the several measures of preventive medicine brought forcibly to his attention before he will even become interested in the proposition. This the family physician should do. He must do it if he is giving all he can for the health of his patients. It is his duty in this age to foster actively the carrying out of prophylactic measures in the families of his patients, including such measures as the placing of silver nitrate in the eyes of the newborn, immunization against diphtheria and smallpox, immunization against typhoid and paratyphoid when advisable, and periodic physical examination of adults and children at regular intervals. Other measures that may depend on the local environment, such as the prevention of rickets and goiter, are certainly preventive measures that the conscientious physician cannot neglect. As to the second item—the duty of the physician to the community—should he remain strictly aloof and tend to his knitting? He most certainly should not. Not only the physician, but the medical societies should be actively interested in these community affairs. When the physicians of a community fail to accept such appointments, it may result in some ill trained individual being

invited to take the appointment which often leads to misadvice, lack of proper professional procedure and friction with the medical profession. It is realized that a small percentage of physicians in the country is doing essentially what has been outlined. It is Osborn's object in this paper to keep this phase of preventive medicine in the forefront of the practice of medicine. Osborn has been stressing the duty of the private physician. There are similar duties of the official and of the voluntary health agencies. The most important duty of the latter two groups is to aid the physician in carrying on his work in this preventive line and not to carry out a single piece of preventive medicine that the physician can do and should do. Finally, Osborn wishes to express his appreciation to those physicians who are carrying on essentially as he has attempted to portray. On the other hand, physicians through their societies should endeavor to spread the practice of individual preventive medicine much more than is now being done. It does not appear practicable or desirable to leave to another group of possible specialists the practice of preventive medicine which is the field of the general practitioner, the family physician.

INTRODUCTION OF NEW DRUGS

W. A. Puckner and Paul Nicholas Leech, Chicago (Journal A. M. A., November 23, 1929), discuss the creation and work of the Council on Pharmacy and Chemistry, and the considerations governing the introduction of a drug. The composition must be known, including adequate evidence of composition and molecular structure. Impurities must be eliminated by appropriate tests. An approved method of assay is necessary in order that pharmacologic and clinical work may be comparable. In case of biologic products, other methods of control and assay must be substituted as, for instance, "insulin units." The action on experimental animals should be studied by a competent pharmacologist. The crucial test of a drug is carefully controlled clinical experimentation. Often after a drug has shown promise of considerable merit, it has been introduced through the wrong channels. Many a substance has suffered because the promoters have announced the discovery and discussed the therapeutic use through the daily press rather than presenting the claims, sup-

ported by scientific data, through proper scientific mediums which have a clientele capable of judging therapeutic evidence. The selection of a proper name is important. The name should be indicative of the chemical composition. The medical profession justly looks with suspicion on a product which has a therapeutically indicative name. When the generic chemical name is too involved for practical usage, a coined contraction is quite in order; as an example, barbital for diethylbarbituric acid. Progressive salesmen of drugs find it to their advantage to make conservative claims for a new drug; most of them present their new additions to materia medica to the official body appointed by organized medicine to inspect the competence of the evidence and to pass on the status of new and nonofficial remedies. The clinician, who is not primarily a laboratory investigator, is reminded that it is not safe to use a drug until it has been found acceptable by the Council on Pharmacy and Chemistry. Acceptance insures a careful inspection of the chemistry, pharmacology clinical evidence and method of marketing of the preparation. It is not safe to use in the human body a preparation of unknown composition, of unknown potency or of doubtful dosage or a preparation the claims for which have not been established by scientific unbiased evidence.

Personal and News Items

Dr. and Mrs. J. P. Sheppard of Little Rock left November 1st for a month's stay in Mexico City.

Dr. Sam J. Allbright of Searcy recently visited in Little Rock.

Dr. H. H. Nichuss, El Dorado, has returned from a recent trip to Chicago.

Dr. and Mrs. I. M. Haskey of Morefield were recent visitors to Little Rock.

The name of Dr. L. H. Lipsey of Wynne was inadvertently omitted from our annual roster published in the November Journal.

MARRIAGE—Dr. F. A. Corn, Jr., of Lonoke to Miss Christine Huffman of Little Rock, December 5, 1929.

Dr. H. D. Wood of Fayetteville has returned from a seven weeks visit in the East. While in New York City he attended the clinics and reports a most enjoyable visit.

The following names were received too late to appear in the list of members published in the November Journal:

Juo. D. Love and H. A. Ledbetter, Hartman.
F. S. Alexander, Mena.

Wm. Johnston, Hardy.

Dr. Geo. F. Jackson, Little Rock, Medical Director of the Pyramid Life Insurance Company, was recently made a member of the Board of Directors. Also, at the recent election of the local Kiwanis Club, Dr. Jackson was elected president for the ensuing year.

The Ninth Councilor District Medical Society convened at the Hotel Seville, Harrison, December 3. The counties included in the district from which physicians attended were: Boone, Carroll, Baxter, Newton, Marion, Van Buren, Searcy and Clebourne.

The United States Veterans' Bureau Hospital No. 78 at Fort Roots, Little Rock, already one of the five largest of its class in the United States, is destined to grow even larger, it was predicted by Dr. J. M. Ferguson, who is head of the institution. Dr. Ferguson recently moved to Little Rock from Gulfport, Miss.

He said, "the surroundings at Fort Roots are ideal for a hospital of this kind. It is secluded here, and quiet; yet the patients need not feel they are entirely apart from the world."

The hospital now has 653 patients, which will be increased to 800 when the new building is ready for occupancy, which will be soon.

Dr. Ferguson was in neuropsychiatric work during the war, at Camp Johnson, Florida, and at Plattsburgh Barracks, New York. After that he served as examiner for the Veterans' Bureau at his native city of Central City, Kentucky; then he became head of the Gulfport Hospital January 1, 1922.

He is married and has two children, Jo. M. Ferguson, Jr., aged 14, and Mary Ellen, 11.

Dr. Ferguson was accompanied to Fort Roots by three members of his Gulfport Staff; Dr. John A. Pringle, clinical director; George H. H. Pratt, business manager and William C. Simpson, property custodian. They will hold similar positions at Fort Roots.

The following Arkansas physicians attended the recent meeting of the Southern Medical Association at Miami, Florida:

J. T. Altman, Jonesboro; C. A. Archer, DeQueen; Wm. R. Bathurst, Little Rock; E. L. Beck, Texarkana; L. R. Brown, Little Rock; F. W. Carruthers, Little Rock; J. S. Chastain, Prescott; Dewell Gann, Jr., Little Rock; M. C. Hawkins, Parkdale; Martin C. Hawkins, Little Rock; W. G. Hodges, Malvern; Wm. E. Jones, Little Rock; Roscoe C. Kory, Little Rock; Paul S. Mahoney, Little Rock; H. H. McAdams, Jonesboro; Madeline Melson, Little Rock; O. C. Melson, Little Rock; Pat Murphy, Little Rock; M. L. Norwood, Lockesburg; Thaddeus G. Porter, Hazen; Morgan Smith, Little Rock; B. S. Stokes, Center Point; Francis S. Tarleton, Hot Springs; Harvey S. Thatcher, Little Rock; O. C. Wenger, Hot Springs.

FOR SALE—Home and office at a bargain. Town of 1,500. Churches, schools, good roads and farms. Small cash payment, with terms to suit purchaser. Write W., care Journal, Arkansas Medical Society, 814 Boyle Bldg., Little Rock.

FOR SALE—Duplex Major Deep Therapy Lamp. Same as No. 24F5475 advertised by Aloe Company. All in good condition. Address B, care Journal, Arkansas Medical Society, 814 Boyle Bldg., Little Rock.

ARKANSAS MORTALITY STATISTICS: 1928

Washington, D. C., November 26, 1929.—The Department of Commerce announces that the 1928 death rate for Arkansas was 1,028.7 per 100,000 population as compared with 1,522.2 in 1927.

Increases in rates (per 100,000 population) from those of the preceding year were from the following principal causes: diseases of the heart (90.4 to 99.1), nephritis (60.9 to 68.8), cerebral hemorrhage and softening (40.1 to 46.6), diabetes mellitus (7.1 to 9.4), and tuberculosis, all forms (76.8 to 78.6). Increases were shown also for influenza (25.6 to 59.9), pneumonia, all forms (54.1 to 80.1), congenital malformations and diseases of early in-

fancy (47.3 to 49.8), appendicitis and typhilitis (14.0 to 16.4), diarrhea and enteritis, under 2 years (25.7 to 27.9), measles (3.8 to 13.8) malaria (42.1 to 44.7), and meningococcus meningitis (0.5 to 0.9).

The rate from automobile accidents (excluding collisions with railroad trains and street cars) increased from 8.8 to 10.9, from accidental falls 6.8 to 7.8, from mine accidents, 0.8 to 1.4, and from excessive heat (burns excepted) 0.4 to 1.0.

Significant among the decreases in rates from 1927 to 1928 were those from typhoid and paratyphoid fever (23.1 to 17.7), whooping cough (9.8 to 6.0) diphtheria (8.8 to 7.3), acute anterior poliomyelitis (1.7 to 0.9), scarlet fever (0.9 to 0.7) diseases of the arteries, atheroma, etc. (11.3 to 9.3), syphilis (11.3 to 9.6), pellagra (34.1 to 32.6), and cirrhosis of the liver (4.1 to 2.9). The rate from homicide decreased from 16.4 to 14.7.

The death rate from all accidental causes decreased from 67.4 to 57.4, the individual types of accidents showing the greatest decreases being accidental drowning (12.0 to 4.5), burns (conflagration excepted) (6.7 to 5.1), railroad accidents (5.6 to 4.4) and machinery accidents (1.9 to 1.4).

The estimated population in 1928 was 1,944,000 and in 1927 was 1,923,000.

Miscellany

FATIGUE, HEALTHY AND UNHEALTHY

By ELIZABETH COLE

Every healthy person really likes to be active. Energy is constantly being produced in the body and must be expended. Nothing is more pleasant than the realization that a good job has been well accomplished and the normal fatigue that was thereby induced will disappear with a refreshing night's sleep.

It is only when the body and mind are overworked over a prolonged period of time that the dangerous sort of fatigue results. This is a chronic fatigue which creates poisons in the body and renders it susceptible to serious sicknesses. Fatigue is due to a chemical waste that circulates in the blood. Scientists have shown that certain chemical fatigue substances when injected into animals, produce all the symptoms of fatigue. A tired person is a poisoned person. As long as there is a balance of rest, during which time the blood has

a chance to purify itself (and nature has arranged for this), all is well. But when this chemical poisoning is allowed to continue for a period of time it will poison the muscles, the brain, the heart, the blood, the whole body. Fatigue, therefore, may be called a warning signal and is really nature's way of protecting against overwork. When sleep will not refresh and when the hard working or hard playing man or woman can no longer awaken in the morning ready and eager to take on new duties, then is the sign that chronic fatigue is setting in.

The symptoms of fatigue may be either physical or mental or both. For example, it has been found from experiments performed on animals that the nerve leading to certain muscles will be exhausted although the muscle will be able to work perfectly. When this happens there is a lack of co-ordination, a very serious situation in certain forms of industry. The working man whose brain and muscles do not work in harmony is in danger of sustaining a severe accident. This is especially true in running machinery which demands mental as well as muscular action.

Heavy physical work can be done more efficiently by comparatively younger men. Chronic fatigue is bound to attack the older men in such groups as coal miners, iron, steel, and tinplate workers sooner or later and this creates an industrial problem that may well be faced. Naturally the older the man becomes the more wages he should be worth and is entitled to, yet the fatigued man from 40 to 50 will undoubtedly be scrapped at the age period when he should be feeling more settled in life. In time it may be possible for these men to learn an alternate trade and then the problem of chronic fatigue can be abolished in these trades.

In thinking about fatigue it is interesting to note that experiments performed on dogs have shown that diet greatly influences their susceptibility to fatigue. Dogs at Cornell Clinic in New York City were made to run on revolving platforms. When they had run for one mile, they were allowed to rest for one hour. This was repeated until they had run four miles. When they had been fed on carbohydrates and fats they could run on their reserve strength over a period of 28 days with no food, only water. They were exercising at the expense of their body fat and the fatter

ones could run much better than the excessively thin ones.

Athletes training for races have also been fed on different diets to find out which kinds of foods gave them the longest endurance. The carbohydrates were used up first while the fats were more slowly absorbed. Long standing fatigue cannot be helped except temporarily by food, but a physically tired person often can be pepped up for the time being by taking sugar.

The present fad for dieting then would certainly seem to be a foolhardy one to pursue for the person who does a great deal of muscular work or play. It is foolhardy anyway without the doctor's orders.

While fatigue is seldom a direct cause of death its presence brings about a rundown condition that may lead to frequent colds, grippe, and sometimes to more serious illness. Fatigue is also a common symptom of tuberculosis and is regarded by the physician as one of the early danger signals of that disease. This fatigue, however, is not the same as that which is the result of overwork.

To combat fatigue doctors urge the use of sound-proof devices, modern improvements in factories and work shops, and mechanical fatigue abolishers, but above all they urge the intelligent pursuit of health habits, the most important of which is sufficient rest. Take time out once in a while to relax the whole body, open the windows, take a walk in the sunshine during your noon hour, eat nourishing and well balanced meals, stop worrying, keep yourself physically fit by consulting your doctor regularly once a year before sickness can attack you instead of after it has.



This is the sort of advice given by the National Tuberculosis Association and its affiliated associations in their educational campaign to prevent such sickness forerunners as fatigue. Their work is supported by the penny Christmas seals sold in December.

Communications

The Journal of the Arkansas Medical Society,
Little Rock, Arkansas.

Gentlemen:

Since the stain of Mercurochrome on the hands or any other tissue of the body is so objectionable, I submit the following formula for removing same.

Saturate small pledget of cotton and apply. The stain will disappear immediately.

H. R. Webster, M. D.,
Texarkana.

Rx.

Acid Salicylic—1 dram.

Alcohol—2 ounces.

M. Sig: Apply as directed above.

Obituary

BARNER, WILEY B.—Dr. W. B. Barner of Wynne died November 4, 1929. Aged 73. He graduated in medicine from Vanderbilt University, School of Medicine, in 1878 and the Medical Department of Columbia College, New York, in 1884. He had practiced medicine in Wynne for the last twenty-five years. Prior to that time he was connected, for two years, with the State Hospital for Nervous Diseases, Little Rock.

He is survived by his widow, Mrs. Fannie Martin Barner of Wynne, and two daughters, Mrs. R. F. White, McGehee, and Mrs. W. B. Burke, Wynne.

EVANS, ADD A.—Dr. A. A. Evans of Bald Knob died November 29, 1929. Aged 52.

Dr. Evans is survived by his widow, one son, Willis, who is attending medical school in Little Rock, and several brothers and sisters.

PYATT, EDWARD C.—Dr. Edward C. Pyatt of Pine Bluff died November 2, 1929. Aged 59. He was a former health officer of Jefferson County. For the past two years he had been in declining health, but about a year ago he suffered an acute attack of paralysis and never gained sufficient strength to be active again.

Surviving are his widow, three sons, Aaron Pyatt, Ben Pyatt and Smith Pyatt all of Osawatomie, Kansas, and a daughter, Miss Annie Pyatt of Grapevine, Texas.

WALKER, BENJAMIN F.—Dr. B. F. Walker of Jonesboro died November 15, 1929. He was an honorary member of the Arkansas Medical Society.

FIRST COUNCILOR DISTRICT MEDICAL SOCIETY

The First Councilor District and Northeast Arkansas Medical Society held its fall session at Harrisburg, October 17th, where the Society was entertained by the Craighead-Poinsett County Medical Society.

About a hundred doctors and their wives were in attendance from the following towns: Memphis, Little Rock, Pine Bluff, Jonesboro, Paragould, Blytheville, Marion, Marked Tree, Trumann, Walnut Ridge, Imboden, Portia, Black Rock, Monette, Brookland, Tyronza, Pocahontas and Bay.

The meeting was called to order and presided over by Dr. L. H. McDaniel of Tyronza. Music was furnished by Miss Chlo Van-Berber's orchestra.

The program follows:

Invocation—Rev. J. L. Shelby, Pastor, First Methodist Church, Harrisburg.

Address of Welcome on Behalf of the Craighead-Poinsett Medical Society—Hon. I. M. Greer, Harrisburg.

Response to the Address of Welcome—Dr. H. H. McAdams, Jonesboro.

"Leucorrhoea, Causes and Treatment"—Dr. W. H. Brandon, Memphis, Tenn. (Discussion was opened by Dr. J. O. Gurney of Pine Bluff.)

"Diagnostic Problems"—Dr. S. F. Hoge, Little Rock.

"Obstetrical Surgery"—Dr. J. T. Altman, Jonesboro.

"Some Few Faets Concerning the Biology of the Plasmodia in Malarial Fever"—Dr. Ralph M. Sloan, Jonesboro.

"Therapeutie Fads and Fallacies"—Dr. B. F. Turner, Memphis, Tenn.

President's Address—Dr. L. H. McDaniel, Tyronza.

"Acute and Chronic Cystitis: Findings in One Hundred Cases"—Dr. Thos. D. Moore, Memphis, Tenn.

"Mucous Colitis"—Dr. Henry Rudner, Memphis, Tenn.

"The Doctor From the Lawyer's Viewpoint"—Hon. J. J. Mardis, Harrisburg.

Time would not permit the reading of all the papers on the program. Those not read were by Dr. J. H. Lamb, Paragould; Dr. R. M. Jernigan, Jonesboro; Dr. G. A. Warren, Black Rock. It was voted that they be presented before the Craighead-Poinsett County Medical Society at a later date.

The election of officers resulted in the unanimous election of Dr. A. G. Henderson of Jonesboro for President and Dr. F. D. Smith of Blytheville as Vice-President.

Dr. F. D. Smith of Blytheville extended an invitation to the Society to hold its spring, 1930, session in Blytheville, which invitation was unanimously accepted.

PRESIDENT'S ANNUAL ADDRESS*

L. H. McDANIEL, M. D., Tyronza

For the past half century it has been the custom of our most powerful political party to assume credit for all good things—from winning the World War on down to the sunshine, good prices, and bumper crops. And with the characteristic altitude of the professional politician who "points with pride" upon every good thing he can recall. I point with pride to our Northeast Arkansas Medical Society with this excellent program with its review of medical facts we are having brought so vividly to us, with the announcement of new facts in the medical world, and the proposal of new theories which may benefit mankind and bring honor and credit on our pro-

fession as they are proven and utilized. However, I am not going to further follow in the footsteps of the political bally-hoo artist and "view anything with alarm."

To my inexperienced mind, I can see where most satisfactory results are daily and constantly coming to our profession, that of organized medicine. Never in the history of medicine has the ethical and scientific physician been so greatly appreciated, and Gentlemen of the Profession, I attribute this to the new school of medical thought which takes our patients into our confidence as we approach his complaint from a scientific viewpoint, and try to advise him thoroughly yet conservatively, and relieve or alleviate in a judicious and conscientious manner.

The theories of quackery with all their deception and false promises are falling into disrepute and disuse from their own unworthiness and top-heaviness, all from a failure to approach medical situations from a scientific attitude. I rejoice that I belong to a profession which is constantly on the alert for improvement whether it be trying to find out a method to give maximum doses of arsenic without reactions or to perfect a major abdominal operation with a minimum amount of shock; a profession which is conservative enough not to accept every fantastic unproven medical dream and yet progressive enough to be constantly striving and yearning for any and every new theory which is scientific and logical.

It is indeed gratifying when we think that the public at large is beginning to become educated enough on medical lines to be able, more often than formerly, to appreciate scientific approach at its true worth and relegate quackery and hoodooism into the back ground. I am indeed glad when I visit the offices and clinics of my brother physicians whether it be in Jonesboro, Blytheville, Memphis, or elsewhere that I do not find them filled with queer contrivances and appliances which more often mislead than help which were so much more prevalent one or two decades ago than now, nor the former abundances of unproven concoctions that often bordered on unscientific reasoning if not actual quackery, but instead find a happy abundance of x-rays, laboratories, and other scientific material of proven fact.

Nor gentlemen would I dare have you think that I am criticizing that great and good class of physicians of fifty years ago, or twenty

*Read before the Fall Session of the First Council District and Northeast Arkansas Medical Society held at Harrisburg, October 17, 1929.

years ago, whose untold perseverance, unceasing efforts, staunch ethics, keen insight, sincere sympathy, and devoted love of our profession have left the way easier for us, with the indispensable apparatus they helped devise, to approach disease scientifically and treat it judiciously for I am not. I respect their sowing that good seed of "proper approach and justified action" for we as doctors today are now reaping to our benefit and their everlasting honor. But gentlemen, they prepared the way, we reap the benefits; they carried their patients to the hospital on a few quilts in an open wagon, we have an ambulance; they had to rely on signs and symptoms which were often fallible, we have the x-ray, microscope, and new chemical reactions to diagnose our cases and often to treat them; they often did not take the laity into their confidence and diagnosis and treatment were often matters either shrouded in mystery, or consisting of some pet secret treatment or concoction which often lead to a lack of confidence by the public. We have our methods of scientific approach, invite the patients confidence, and demonstrate to him and convince him that we have reached a diagnosis based on fact and can suggest a treatment based on reason.

Why do I think that the cults, quakeries and fakes are on the decline? Simply because this is an age where the public demands that everything that expects to continue in general favor must produce results and continue to produce them, whether it be a car, a radio or a treatment for disease. Excessive advertising may prolong the unwarranted success of any inferior article whether it be a car, or a medical treatment, but it cannot hold it up indefinitely. Abrams treatment, as well as other unwarranted theories, could not stand the powerful searchlight that an intensively alert public throws on everything, material or otherwise, that expects to enjoy public approbation. I am indeed glad that to a large extent the day of placebos is over and that we are now searching for the cause of pathology to relieve it logically.

It is my hope that we will not rest on our laurels, but with the enthusiasm of those tireless medical workers who have studied and given us the benefit of their toil and brain we may go on each day, getting nearer to perfection in our approach and treatment of disease; that we will bring an even deeper appreciation by the public of our profession,

as the pendulum is certainly swinging that way; that each one of us have a great hand in the relief of human suffering and the prolongation of human life, and that the world will be left brighter and happier by our having lived in it and sympathized with it.

County Societies

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The regular November meeting of the Benton County Medical Society was held in the Youree Hotel, Siloam Springs, November 14.

Present: Cox, Crockett, Duncan, Eubanks, Gullledge, Duckworth, Moore, Love, Highfill, Powell, Scott, Smiley and Wilson. Guests: Sellers, Seahorn, Robinson, McCormick and Paul F. Stookey.

Dr. Paul F. Stookey of Kansas City held a very interesting skin clinic. He also gave an address on "Cerebrospinal Meningitis." Dr. J. T. Powell of Gravette presented a skin case, which was diagnosed as granuloma fungoides.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The regular monthly meeting of the Lawrence County Medical Society was held November 12, as the guests of Dr. H. R. McCarroll of Walnut Ridge.

Present: Guthrie, Johnston, Hatcher, Warren, McCarroll, Neece, Henderson, Robinson and Stidham.

The following scientific program was rendered:

"Estivo-Autumnal Malaria" by Dr. G. A. Warren. The subject was discussed by Dr. Hatcher and others.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society held its regular monthly meeting Thursday night, November 7, at Bearden. The physicians of Bearden were hosts to the Society. The meeting was held in the Bearden High School building, and a delicious banquet was served

by the Domestic Science Department of the school.

Mayor Craig delivered an address of welcome in behalf of the town of Bearden and Dr. E. J. Byrd in behalf of the hosts.

The scientific program consisted of a talk by Dr. John L. Jelks of Memphis on "Observations of Intestinal Infections and Intestinal Surgery." A talk on "Some Conditions of the Chest Associated with Hemorrhage" was given by Dr. O. C. Melson of Little Rock, and a paper on "Duodenal Ulcer" was presented by Dr. H. W. Hundling of Little Rock.

The following physicians were present:

Rhinehart, Powell, Jameson, Word, Hollingsworth, McGill and Robins of Camden; Partee of Stephens; James of Holly Springs; Rhine of Thornton; Rushing of Chidester; Hathcock of Locust Bayou; Jones of Woodberry; Byrd, Kennerly and Thompson of Bearden. Dr. John L. Jelks of Memphis and Drs. O. C. Melson and H. W. Hundling of Little Rock were guests of the Society.

The next meeting will be held in January, at Camden, and Dr. N. S. Word will entertain the Society.

CRAIGHEAD-POINSETT COUNTIES

(Reported by THAD COTHERN, SECRETARY)

The Craighead-Poinsett Medical Society met November 7, in the dining room of the Noble Hotel. A fair number were in attendance and the social dinner hour was enjoyed.

Dr. R. M. Jernigan of Jonesboro read a paper entitled "Diphtheria." Practically all phases of the disease were brought out by the paper, and the discussion was general.

The scientific program for the evening being finished, the next matter considered was the progress of the Physicians' Business and Credit Rating Bureau. The secretary read some letters from Bureaus of this character in various places relative to affiliation with a national organization. The Society now has co-operation from Bureaus in Michigan, Minnesota, Tennessee, Alabama, Mississippi, Oklahoma and other States, as well as an extension from various counties and cities in Arkansas. Practically all the surrounding counties and towns have their organizations perfected to a fairly efficient working stage and will soon be bearing fruit in forestalling the service rendered to the patient who makes no effort to pay. A motion was made and car-

ried that the Bureau's secretary tabulate, as soon as possible, the information furnished by the different physicians concerning their poor and slow pay patients, and have these lists printed immediately.

CRAIGHEAD-POINSETT COUNTIES

(Reported by THAD COTHERN, Sec.)

The Craighead-Poinsett Medical Society held its second regular meeting for November on the 21st, in the dining room of the Noble Hotel. Among the out-of-town physicians present were: Lamb and Cupp of Paragould; McDaniel, Tyronza; Reagan, Marked Tree; Hunn of Harrisburg and McCurry of Cash.

A symposium on High Blood Pressure was the scientific subject. Papers being read by Dr. J. H. Lamb of Paragould and Dr. J. H. McCurry of Cash. A motion was made and carried that the papers be printed so all the doctors might enjoy them.

Drs. Rateliff, Howell and Cothern were appointed on a committee to draft suitable resolutions pertaining to Dr. F. B. Walker, recently deceased.

The activities of the Physicians' Business and Credit Rating Bureau were taken up, and a committee was appointed to canvass the return of the votes for a Board of Directors. A motion was made and carried that the Board, as soon as elected, should organize and push the work of the Bureau. All the physicians present reported that the majority of their patients were making an earnest effort to settle their accounts.

Book Reviews

Posture and Hygiene of the Feet.—By Philip Lewin. (One of the National Health Series). Flexible Fabrikoid. Published by Funk & Wagnalls Company, New York. Price 30 cents.

For a volume of modest size, "Posture and Hygiene of the Feet" covers a surprisingly large amount of ground. The chapter headings are: The A-B-C of Foot Hygiene, Proper Care of the Feet, Flatfoot and Its Correction, Disturbances of the Metatarsal Arch, Ankle Sprains, and Other Injuries. Even these cannot give a full idea of the number of topics covered, for there is information regarding choosing the right shoes, hosiery, garters, fallen arch, arch supports, sprained ankle, etc.

Essentials of Prescription Writing.—By Cary Eggleston, M. D., Assistant Professor of Clinical Medicine, Cornell University, Medical School. Fourth Edition, Revised. 16mo of 153 pages. Published by W. B. Saunders Company, Philadelphia. Cloth, \$1.50 net.

While this book is small, sufficient information is given to thoroughly grasp the essentials of prescription writing.

Imperative Traumatic Surgery.—By C. R. G. Forrester, M. D., F. A. C. S., Consultant, Teaching Staff, Illinois Post-Graduate School, Laboratory of Surgical Technique, Chicago. 598 illustrations. Published by Paul B. Hoeber, Inc., New York. Price, \$10.00 net.

That this text is along entirely new lines is perhaps best demonstrated by (1st) the handling of fractures and dislocations which are not given classical attention, but such treatment as can be applied at once with expectation of best results and (2nd) by the emphasis placed on prognosis which in all instances cover the "time of disability" as well as the "forecast of outcome."

History of Medicine, with Medical Chronology, Suggestions for Study and Bibliographic Data by Fielding H. Garrison, M. D., Lt. Colonel, Medical Corps, U. S. Army, Surgeon-General's Office, Washington, D. C. Fourth Edition, Revised and Enlarged. Octavo of 996 pages, with 286 portraits and other illustrations. Published by W. B. Saunders Company, Philadelphia. 1929. Cloth, \$12.00 net.

While the author has attempted to make this volume useful for reference purposes, we cannot pass the opportunity to note the comment made by Dr. James Gregory Mumford, "The story of medicine is vital and inspiring, no matter from what angle you approach it. The history of medicine is never dull."

Among the new material in this edition we find a section on medicine in prehistoric times.

The Surgical Clinics of North America.—(Issued serially, one number every other month.) Volume 9, No. 1. (Mayo Clinic Number—February, 1929). 247 pages with 141 illustrations. Published by W. B. Saunders Company, Philadelphia. Per Clinic Year (February, 1929 to December, 1929) Paper, \$12.00; Cloth, \$16.00.

This volume opens with cases from the clinic of Dr. E. Starr Judd. Discussing the following subjects:

"Extensive Carcinoma of the Stomach with Pancreatic Involvement; Cases in Which Satisfactory Results Followed Resection."

"Hemangioma of the Duodenum."

"Stones in the Common Duct Following Removal of the Gall-bladder."

"Papilloma of the Renal Pelvis."

Twenty-one other clinicians describe cases in this volume.

Textbook of Urology.—For Students and Practitioners. By Daniel N. Eisendrath, M. D., Attending Urologist Michael Reese and Chicago Memorial Hospitals, and Harry C. Rolnick, M. D., Associate Urologist Mt. Sinai Hospital. 700 Black and White Illustrations and 11 in color. Published by J. B. Lippincott Company, Philadelphia.

This book presents in the simplest manner the essentials on Urology. The author presents the important feature of diagnosis and treatment of disease of the urinary tract in both sexes. An important feature of this work is the splendid illustrations.

Physical Therapeutic Technic.—By Frank Butler Granger, M. D., Late Physician-in-Chief, Department of Physical Therapeutics, Boston City Hospital; Director of Physiotherapy, United States Army; Medical Counselor, United States Veterans' Bureau; Member of Council on Physical Therapy, American Medical Association; Instructor of Physical Therapeutics, Harvard Medical School. With a foreword by William D. McFee, M. D., Boston, Mass. Octavo volume of 417 pages with 135 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, \$6.50 net.

This book will be found to be thoroughly practical, comprehensive, and complete in every detail pertaining to "Practical Therapeutic Technic." It is of interest to the physician who has installed a limited equipment, such as a diathermy machine and an ultra-violet ray generator, as well as those already familiar with the work of physical therapy.

Pediatrics for the General Practitioner.—By Harry Monroe McClanahan, A. M., M. D., Professor of Pediatrics Emeritus, University of Nebraska; Member of the American Pediatric Society. 230 Illustrations. Published by J. B. Lippincott Company, Philadelphia.

The author's purpose in presenting this book is to give a modern clinical picture of the diagnosis, treatment, and management of the diseases of infants and children. Much space is given to the practical side of symptoms, diagnosis and treatment, together with observations on the care and protection of the normal child in health.

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in these officers.

DIRECTORY

OF THE COUNTY SOCIETIES OF THE ARKANSAS MEDICAL SOCIETY

1929

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No. 8

Original Articles

CAESAREAN SECTION*

THOS. J. BUSH, M. D., El Dorado

Reviewing literature reveals that some forms of caesarean section were known and practiced by physicians of antiquity, possibly by the early Egyptians. As early as 715 B. C. a law of the land expressly commanded the removal of the child before burial of the mother.

The first generally accepted caesarean section was performed by Trautman of Wittenburg in 1610, and in 1879 natives of Uganda are supposed to have performed this operation, with remarkable results as regards mortality. From 1610 until Sanger's operation in 1882, history shows a frightful mortality. Tarnier is said to have made the statement that no woman had survived this operation during the nineteenth century.

In 1877, Poro of Pavia advised the supravaginal amputation of the uterus in order to avoid the dangers of hemorrhage and infection, this operation bids fair to replace the old method, but in 1882 Sanger's operation showed such good results that Poro's was soon relegated.

Previous to Sanger's in 1882, the abdominal and uterine incisions were made in all possible locations, the essentials of Sanger's operation are: Median abdominal incision; median uterine incision; use of rubber ligature around cervix to stop hemorrhage; interrupted sero-muscular sutures; interrupted sero-serous sutures; and extreme antisepsis.

Indications

The most difficult thing about a caesarean section is the placing of the indication; I know

of no operative procedure around which opinions are so divergent. DeLee thinks that too many sections are done in some places and not enough in others.

Many cases that require a section are so handled that a craniotomy is necessary to save the mother's life, and I know of no procedure so revolting as a brutal forceps operation where the mother is frightfully lacerated.

Indications may be divided into absolute and relative. Under the absolute we have the following: No. 1, contracted pelvis, true conjugate less than $7\frac{1}{2}$ c. m. No. 2, malignancy of the cervix, bladder or rectum with obstruction of the pelvis. No. 3, obstruction from fibroid tumor or ovarian cyst. No. 4, gigantic child whose head will not engage. No. 5, dying woman where a child may be saved.

The most frequent indication for caesarean section is pelvic obstruction. Williams states that a true conjugate of less than $7\frac{1}{2}$ c. m. renders the spontaneous birth of an ordinary full time baby impossible. The pelvimeter serves to demonstrate the adequacy or inadequacy of the pelvis. The size and position of the child must necessarily enter into the individual case, and possibly the best pelvimeter of all is the fetal head.

From a careful study of literature there seems to be no discussion concerning malignancy of the cervix, bladder or rectum and that the caesarean section is an absolute indication.

I will not undertake to treat further of indications classed as absolute but devote my time to what is known as border line or relative conditions.

Around the RELATIVE indications, some 16 in number, is found the wide divergence of opinion and the object of this paper will have been accomplished if it shall induce those of us who practice surgery to weigh carefully the advantages to mother and child of caesa-

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rean section rather than high forceps application.

Without going into a lengthy discussion of each, the following conditions in my opinion justify this operation, placenta previa; eclampsia; previous caesarean section; some cases of faulty presentations in primipara; uterine inertia; prolapse of the cord where cervix is not dilated, and broken compensation of the heart.

While my experience with placenta previa has been limited, I believe most of you who have faced this condition will welcome caesarean section. In cases of eclampsia that do not respond to treatment and where convulsions are frequently occurring, especially where dilatation is nil, caesarean section offers the best results.

In heart conditions, whether compensating or not, the question arises, can the patient stand a long tedious labor? If time permits, digitize them and then do a caesarean section.

Since it is an established fact that living babies can be obtained easily by this operation, we should next consider the dangers to the mother.

First: Hemorrhage. In the early days of caesarean section hemorrhage was one of the greatest dangers. This has been practically eliminated by the use of pituitrin, ergot, and adrenalin. Also, by an incision in the thin section rather than the body of the uterus proper approximation and sutures have minimized this condition.

Second: Shock. Due to improved technic thereby lessening time of operation and by proper methods of combating hemorrhage is a rare complication.

Third: Sepsis: Infection has always been the most important cause of argument against caesarean section and today is the most serious complication. As in other conditions, the time of operation is an important factor in dealing with infection. If operation can be performed before or at onset of labor without patient having been previously subjected to numerous vaginal examinations, rupture of the membranes, or attempted forceps delivery, the chance of infection is materially lessened. These conditions, however, should not condemn caesarean section any more than an added risk should condemn any other major operation.

Fourth: Rupture of the uterus. Low operations, which will be mentioned later, have materially lessened the danger of this condition and have added to the safety of abdominal delivery.

INCISIONS

In the early history of this operation the incision was made from the symphysis to the xiphoid cartilage, either to the right or the left of the umbilicus, the uterus being incised in the median line in the corpus. In this type of operation there was needless handling of abdominal contents, consequently considerable shock and post-operative adhesions. To overcome these complications a smaller abdominal incision was made, the uterus incised as described and this became what is known as the classical section. In this type of operation injury to the peritoneum and undue handling lowered resistance of the tissues and favored infection.

Next in order came the high longitudinal and the high transverse incisions, neither of which overcame the above mentioned disadvantages. Newell next advocated a lower incision in the median line below the umbilicus in order to overcome this disadvantage of the high operation, the uterus is left in place and the low longitudinal incision is made in the corpus. Since infection and peritonitis continue to be the most interesting problem the cervical caesarean section was next advocated. The extra-peritoneal section devised by Kuestner and Latzko was delivery through the uterus without entering the peritoneal cavity. The disadvantages were: Injuries to the bladder and the ureter, increased amount of hemorrhage and adhesions. Next in order came the transverse peritoneal or Hirst operation, the extra-peritoneal or retrovesical and the transverse cervical. Statistics have shown that the intra-peritoneal offered definite protection against peritonitis and can be performed where the classical caesarean is contra-indicated. The transverse cervical next came into vogue due to the fact that the scar is placed in the lower segment, thereby lessening the danger encountered when the scar was on the uterine body.

Vaginal caesarean section is necessarily limited, due to the following requirements: The child must not be too large, the pelvis ample, the bladder must not be adhered to the uterus, and the uterus must be freely mov-

able in order to be brought down into the vagina.

Each of these types of operation are equally good under certain conditions and in the hands of experienced operators. The types most commonly performed are: First, the conservative caesarean section. Second, the extra-peritoneal caesarean section. I will not burden you with the minute technic of these two operations but wish to remind you of the benefit claimed for the extra-peritoneal when the patient is infected. In this operation the abdomen is opened low, just above the symphysis pubis, with a transverse incision; the bladder is separated from the uterus and the uterus opened at the lowermost portion extra-peritoneally, child and placenta extracted.

From the improvements in the technic in these operations hemorrhage during and after operation has been practically controlled. Shock has been eliminated and infection, except where it arises from within the uterus, has been reduced to the minimum.

Post Operative Complications

There seems to be a tendency for most caesarean section cases to have more distention than from an ordinary laparotomy due to acute dilatation of the stomach or intestinal paralysis. In acute dilatation of the stomach, the treatment is repeated lavage. In intestinal obstruction repeated enemas, turpentine stoops and occasionally colostomy will be necessary.

While my experience with caesarean section has not been as wide as some operators, I shall now relate and comment on four cases taken from a series of fifteen cases operated upon by me in the last seven years.

Case 1: Patient 2096. Aged 18; height 5 feet 4 inches, weight 128, entered Union Infirmary March 8, 1929. Gave the following history. Began menstruating at age of 14, regular, 4 to 5 days duration, no pain. Patient had not felt well for several weeks, and ten days ago began having convulsions, seventeen in number. Was treated by doctor and convulsions stopped in about three days. On March 8, convulsions recurred, patient being kept under chloroform while coming to hospital.

Previous History: Had the usual diseases of childhood. Had appendectomy in 1927.

Examination: Revealed very poor mental condition, tongue and lips lacerated. Heart

and lungs negative. Urinalysis showed a four plus albumin. Systolic blood pressure 140. Temperature 98.6, pulse 118, respiration 26. Vaginal examination revealed the cervix thick with practically no dilatation. The head was not engaged.

Since this patient had received active treatment by her physician, and in spite of this, had a recurrence of the convulsions, and since there is no history of effort at delivery or infection being present, the classical caesarean section was at once decided upon. Ether was the anesthetic chosen, but was discontinued as the patient began having convulsions shortly after beginning operation. Patient was delivered of a normal child weighing 5½ pounds.

After History: After operation, the patient's temperature was 100 and pulse 132. This gradually came down until the fifth day when it was normal. There were no more convulsions but her mental condition remained poor up until a few days before leaving the hospital. The stitches were removed on the tenth day. March 26 a letter from a relative stated that both the mother and the baby were doing fine.

Case 2: Patient 2063; aged 21, entered hospital November 31, 1928, gave the following history. Began menstruating when 15 years of age, regular as to time and amount, married when 18, no children living, one dead. Previous pregnancy normal up to time of delivery at which time craniotomy with manual delivery was necessary.

History of Case: I was called to patient's home at 7:00 p. m., November 30, 1928, found her having severe uterine hemorrhage which came on suddenly without pain. Sterile packs were placed in the vagina and the patient was sent at once to hospital. Examination under strict asepsis revealed placenta previa.

Physical Findings: Head, eyes, ears, nose and throat normal. Chest expansion full and equal. Breasts enlarged. Heart rate fast, otherwise negative. Abdomen enlarged to size of full time pregnancy. Fetal movements easily obtained. Vagina soft, protruding mass at cervical opening which proved to be placenta. Urinalysis showed a one plus albumin.

Since this patient had not been previously examined and there was no evidence of infection and since a craniotomy was necessary at her first delivery, a classical caesarean section

seemed far more logical than any other form of delivery, especially in view of her present alarming condition.

Gross Findings: Full term pregnant uterus. 8½ pound child delivered. About one-half of the placenta was detached and found in the cervix. No evidence of ovarian or uterine disease.

After History: Patient's temperature was 99; pulse 120. This lasted for about three days, remaining normal until her discharge from the hospital on the twelfth day. Stitches were removed on the tenth day, there was no evidence of infection. Both mother and child were discharged in good condition.

Case 3. Patient 692, aged 33, entered hospital July 27, 1925; gave the following history: Had the usual diseases of childhood. Developed small umbilical hernia at the age of three years during an attack of pertussis. Menstruation began at age of 14, regular, lasting five days. Married at 21. Two miscarriages at three and four months. Two boys living, ages 13 and 14 years. States that hernia has increased in size with each pregnancy.

History of Case: This patient was under my care throughout her pregnancy, and on account of size and increasing discomfort of hernia, a caesarean section had been contemplated. On July 6, 1927, the day before entering the hospital, patient began having pain over entire abdomen, nausea and vomiting, which became progressively worse and after consultation patient was sent to hospital with diagnosis of strangulated umbilical hernia.

Examination: Eyes, ears, nose and throat normal. Anxious expression. Heart and lungs negative. Abdomen enlarged to size of full time pregnancy. Large umbilical hernia. Temperature normal. Pulse accelerated. Urinalysis normal. Since there had been no vaginal examination and there was no evidence of infection and since there was a positive diagnosis of strangulated hernia, a classical caesarean section was the only operation to be considered.

Operation: Elliptical incision around hernia, median line extended about six inches downward. Low median incision of uterus. Live fetus and placenta delivered. Uterus closed with two rows of chromic No. 2 and one of plain No. 2 Catgut. Hernia sac ex-

ploded, adhesions released, intestines freed and returned to abdominal cavity. Peritoneum closed and muscles reunited with plain No. 2 catgut. Fascia sutured with chromic No. 2 catgut and skin closed with heavy dermal.

Findings: About twenty inches of small intestine distended, dark in color, adhered with omentum to hernia sac. About eight months' pregnant uterus pressing against hernia.

After History: Patient made an uneventful recovery, good results from herniotomy. Mother and baby discharged on 18th day in good condition.

Patient number 2069. Negro woman, aged 35, entered Union Infirmary, November 26, 1928, gave the following history: Began menstruating at the age of 13, regular amount, normal duration. Married when 19. One miscarriage three years ago at four months. No full time delivery. Denies any venereal history.

History of Case: Patient began having labor pains Sunday, November 25, 1928, about 6:00 a. m., becoming more severe about midnight at which time her physician was called. Patient continued to suffer until 9:00 p. m. Monday, at which time she was sent to hospital. Since this patient had been in labor more than twenty-four hours, repeated examinations had been made, even ineffectual attempts at delivery by forceps, it was reasonable to assume an added risk on account of infection and an extra-peritoneal caesarean section was decided upon.

Examination: Head negative. Chest negative. Heart accelerated. Abdomen enlarged to size of full time pregnancy. Fetal heart sounds heard. Urinalysis normal. Vaginal examination: Cervix soft, dilated to size of a dollar. Fetal head was not engaged.

After History: Patient's temperature was 99; pulse 130. This lasted for several days when there was an elevation of temperature to 101 on account of a slight infection in abdominal wound. Mother and baby were discharged on the 14th day, condition of both being good.

CONCLUSIONS

Indications for this operation are justifiably increasing.

The after treatment should be as simple as possible.

Caesarean section offers more chance for the borderline cases.

Careful aseptic technique should be carried out.

Proper attention should be given uterine closure.

The mortality rate has been high due to improper handling before operation, and being done as a last resort.

DISCUSSION

DR. D. E. WHITE, El Dorado: I didn't get to hear all of Dr. Bush's paper. However, Dr. Bush and I are personal friends. We are proud of him. I had occasion to glance over his paper just before coming up here and, unless he added something different, I know what is in it.

I have had the privilege of lecturing on obstetrics to the nurses in two hospitals in our city and needless to say I believe I have learned more in the last year about obstetrics on account of that particular work than I ever knew before. I really studied it and have gotten more from the fact that I had to study those different things in order to be able to lecture on them.

Of course, in this work the various operations for caesarean section were fully covered. There are indications and contraindications. I believe, as Dr. Bush stated, that in the future and perhaps in the near future the indications for caesarean section will be greatly increased. It seems if some doctor does a great many of them, some one is ready to criticise him.

There are two or three points I want to bring out. One is, as the doctor just read, caesarean section versus forceps delivery. Of course, I feel like the majority of the surgeons are in favor of caesarean section in preference to high forceps delivery and perhaps even to low forceps delivery, provided they thought they were going to have to do that at the time labor began. However, it is only too bad, after labor begins and perhaps you have eventually made up your mind that forceps will have to be applied, then it is too late, most of the time, to do a caesarean section, as by this time it is not safe because your asepsis has been destroyed.

I have one case in mind to illustrate this point; a lady 30 years of age, with rather a small pelvis, but not an absolutely contracted pelvis. She had attempted to have children three times and each time she had a forceps delivery and each time she lost her baby. On the fourth pregnancy she came to me. I measured her pelvis and, although the measurements were fairly normal, with this history we did not undertake to do anything but a caesarean section when she started in labor. We did not even make a vaginal examination when she started in labor, but did an immediate caesarean section. An eight-pound baby was delivered and the next morning when I saw her she was lying there crying; she said to me she was crying on account of happiness. She said that it seemed like a dream; that she went to sleep and when she awakened she had a live baby and she herself was feeling good, and that it was no comparison to the hours and hours of agony she suffered before, when she eventually had a forceps delivery and lost her baby each time.

In regard to the mortality, the high mortality rate attendant upon caesarean section to both the mother and baby is due to the fact that it is being done as a last resort after every other means of delivery have been exhausted. I believe that the time will come, under certain conditions particularly if the mother is of a nervous, neurotic type, when the better accoucheurs will choose caesarean section in preference to even a normal labor.

DR. A. G. HARRISON, Searcy: My remarks will not be offered in the way of a discussion because I was late this morning and didn't hear all of the doctor's paper. I understand, however, it was on caesarean section, reporting a case. I want to say that I did my first caesarean in December, 1907, in a log cabin. The patient was a tall negress with a bony pelvic outlet of two inches. The instruments at my command were six hemostats, a scalpel, a needle holder, and a pair of scissors. The mother made as perfect and as rapid a recovery as though she had had a normal labor. The mother and child are both living and healthy today. I have done this operation no less than forty times since with one fatality and that was a little woman upon whom I did the operation faintly hoping that the impossible might happen. There are today, living in Searcy, two healthy, happy, unmarked, unscarred babies under one year of age being fondled by two equally healthy, happy, unutilized and unlacerated little mothers as the consequence of my having done a caesarean section rather than to attempt a version or high forceps operation. The operation is amazingly simple. It doesn't shock the mother any more than the ordinary labor. It doesn't require any more anesthetic than is required in a tedious or difficult labor. It is not fraught with the danger of hemorrhage from inaccessible points. The parts severed are firmly and perfectly coapted. There are no raw surfaces left to foster infection. In fact, there are no untoward after effects. The mother is left in as good a condition as she was before the baby came. That certainly cannot be said of any other method of delivery; not even the natural one. And then, too, the baby is spared that pressure trauma, torsion and the various other dangers incident to forceps delivery.

Now, compare these results with what happens when the operator introduces his hand into the vagina, forces it up through the cervix, passes it around between the child's head and the uterine walls, and introduces the blades of the forceps and after the blades are there he notices they don't fold together. I have never seen them lock automatically. He usually pushes one blade up and pulls the other one down, and vice versa; he turns them one way and then the other; and finally, when he has them in position to lock, they lack a half inch or an inch, sometimes an inch and a half or two inches, of coming together. He forces them together and then he heaves and tugs and pulls without the slightest conception of the relation between the child's head and the blades of the forceps, without any thought whatever of even trying to simulate the mechanism of labor. There isn't one doctor in five hundred that understands the mechanism of labor. I don't. And there isn't one in five hundred who does understand it that is capable of applying his knowledge in the high forceps delivery. As a consequence, how often have we seen the child's head molded into a shapeless mass that resembled anything in the world rather than a human head. How often

have we seen a tear beginning at the cervix and going on up through the internal os, or even through the musculature of the body of the uterus, sometimes into the pre-perineal cavity. How often have we seen the forceps cut a tear through the rectovaginal septum, producing a rectovaginal fistula, and then several days later see the urine begin to trickle out through the vagina as the result of pressure necrosis of the rectovaginal septum, and then comes the inevitable destruction of the perineal body with its too often subsequent incontinence of feces.

Now, is it any wonder that so many mothers are invalids and nervous wrecks at the age of 30, with the surgeons of the country kept busy doing injuries to the birth canal? Is there any wonder that our institutions are filled with deaf, dumb and blind imbecilic and epileptic children? By comparison, caesarean section is safe, sane, and scientific. Its alternative, the high forceps operation, is unscientific, inhuman, mutilating, and sometimes murderous.

I feel that our Legislature, after having shed its precious blood, overworked its sudorific glands, and martyred its patriotic soul in the frenzied effort to rescue Arkansas from poverty and ignorance, might have crowned its achievements with dignity and perpetuated its memory with a record of its illustrious deeds that would go down in the annals of history, by passing a law limiting the use of pitiutin in the lying-in chamber and prohibiting the manufacture and sale of the long handle or axis traction obstetric forceps.

DR. BUSH, in response: I wanted to hear some criticism, however, I appreciate the discussion offered by the two doctors and, since we are running late, will not take any more of your time.

PRIMARY ABDOMINAL PREGNANCY*

Report of Case

J. T. PALMER, M. D., Pine Bluff

Primary abdominal pregnancy is exceedingly rare, and today many Gynecologist deny its occurrence, yet there seem to be a few authentic cases recorded. The conditions in the free abdominal cavity is favorable to the progress of the fetus. When the ovum comes in contact with the peritoneum, there appears a decidua-like membrane and it is from this source the chorion and placenta secure a reasonable amount of nourishment to promote progress of the fetus. Soon the ovum is surrounded by a capsule, which will attach itself to other organs. Abdominal pregnancy is by no means an easy pathological entity to diagnose.

The diagnosis is usually confounded with tubal pregnancy. Tubal pregnancy is nearly always associated with severe pain and irregular menstruation in women who have previously had some pelvic disturbance or several

years have elapsed since the birth of the last child. In tubal gestation there will be severe pain as the fetus develops. In abdominal pregnancy the contrary prevails, in comparison to the duration of gestation. In the later months of abdominal pregnancy, if the fetus be attached to the liver or other organs in the epigastric region there will be severe pain, otherwise pain will be insignificant until the full term has been reached, when there will be pains simulating light pains of delivery. However, fetal movements will produce pain near full term. There may be some irregularities in menstruation or the menstruation may be wholly absent during the period of gestation. Changes in consistency of the cervix is a helpful diagnostic point in a suspected case. X-ray findings will be of material assistance. Finally syncope may be the final warning to do an exploratory laparotomy.

Report of Case

Mrs. P., aged 29, height 4 ft., 8 inches, weight 185 pounds, married six years.

Family History: Mother living, aged 65. Father dead, aged 47. Cause unknown. Two brothers and one sister living. Two sisters dead. Patient consulted me June 20, 1919.

Personal History: No complaints, sleeps well, appetite good, bowels regular. Two spontaneous abortions of about two months duration dating back about two or three years. No vaginal discharge nor vesical symptoms. The patient came to me because of the enlarged condition of her abdomen, stating that she believed she was pregnant, but did not know. She gave the history that some time in February, 1919, she suffered abdominal pains for several days. Pains were sufficiently intense to require narcotics to obtain relief. After these pains ceased, patient had no inconvenience whatsoever.

Physical examination revealed an unusually short, heavy, healthy woman, examination negative, except a greatly enlarged abdomen. On account of the fat the tumor could not be well outlined. Patient menstruated last, May 28, 1918 and saw no further menstruation until July 10, 1919. Was curetted in June, 1917, for pernicious vomiting, and did not see any more menstruation until July 10, 1919, except a slight flow on June 6, following the curettement. Curettement did not relieve nausea, which lasted sixty or ninety days. At operation Aug. 18, 1919, a median incision was made

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from xiphoid cartilage to symphysis. On opening the abdomen, a large tumor almost filling the entire abdominal cavity was found. This tumor was of a light ivory, glistening color. The pedicle was about one and one-half inches broad and one-half inch thick and was attached behind and to the lower portion of the left broad ligament. The uterus was not engorged and little if any larger than if no pregnancy was present. Both ovaries normal, contained no cysts. Fallopian tubes normal with the exception of the left tube, which was a bit red and engorged. There were no adhesions found in or about the left tube and the left tube showed no evidence of having been ruptured, neither did the right show such evidence. On the left portion of this tumor was attached about six inches of the small bowel and on the right the cecum and appendix were attached. The tip of the appendix was the highest part attached to the sac. The small bowel, the cecum and appendix were dissected from the sac. Appendix was removed and all raw surfaces were covered. The pedicle of the tumor was ligated and cut and the entire mass was removed without rupture. The fallopian tubes were cut and proximal ends buried in the broad ligament to prevent further conception. Abdomen was closed in the usual manner. Convalescence was uninterrupted and patient dismissed from the hospital within fourteen days. On opening the sac, a full term fetus, about 1,200 c. c. amniotic fluid, and a well developed placenta found. There was quite a bit of deformity about the feet and skull of the fetus. The sac was fibrous and thick and only at one point gave sign of necrosis. This patch was dark and was about the size of a silver dollar.

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Editorial Clippings

THE DOCTOR AT EASE

What more pleasant recreation, with the onset of the winter season, than reading, especially if we follow Carlyle's dictum and make our reading "graceful, ingenious and illuminative!" The picture of the warm fireside, the carefully placed light and a good book brings to all of us pleasant memories and pleasurable anticipation. The doctor, perhaps more than to many in other walks of life, reading, if not overdone, renews energies, preparing him for the next day's intensive labor as nothing else can. Few fail to feel the strain of active practice; books afford the surest relief to the monotony of what is so aptly called, "the daily grind."

Reading, however, should afford more than "relief." Those who fail to draw from books an intellectual stimulus, an emotional reaction, or a new insight into life, fail miserably to profit by their fair inheritance. "Reading and much reading, is good," says Burke, "but the power of diversifying the matter infinitely in your own mind, and of applying it to every occasion that arises, is far better; so don't suppress the *vivida vis*." The living force of books, novels, biography, history or essays, was never greater than it is today. The bookshops abound in good reading, much of which ought to appeal to the doctor. Let us examine some of the more recent publications and see if we cannot find the surest relief for our most melancholy moments and some of that "matter" which Burke would have us diversify in our own minds.

Novels by doctors are always of interest: fortunately we have two excellent modern physician-novelists, Warwick Deeping and Francis Brett Young. Deeping's latest book, "Roper's Row," has a doctor for the main character, Christopher Hazzard. We first meet him as a poor, very poor, medical student in London, timid, ill-favored, lame, peculiar. This queer boy enters Bennet's Hospital and is unmercifully "ragged" by his fellow students, a bit of English student atmosphere quite unfamiliar to this country. One enjoys, however, the description of life in the hospital, Hazzard's one friend, Moorhouse, old Sir Dighton Fanshawe, the visiting man, the prize-giving, and many other bits of London hospital life. "Squit" Hazzard gets through it all, devel-

ops a fondness for children, settles in London finds a splendid wife and, after a long struggle, succeeds. Only a physician could have written a book with so much insight into medicine and, while the delineation of Hazzard cannot be considered as superior to that of other doctors in literature, the story arouses our sympathy and gives us a new insight into the soul of a sensitive man, roughly handled by those who ought to have the greatest insight into human nature and its weaknesses.

Young's best medical book, "My Brother Jonathan," gives a splendid picture of a doctor, country practice in England, and the tragedies which it may entail. It comes much nearer greatness than any book of Deeping's; we would find it difficult to believe that any physician would fail to find enjoyment, recreation in the best sense of the word, and a stimulation to be a better doctor from this book. The characters are living persons, even as you and I, and the nobility of Jonathan is sure to leave a lasting impression on anyone's mind. Dr. Young's latest story, "Black Roses," is not primarily concerned with the medical world, although a secondary character, Viva Pietro, is a medical student in Naples. Towards the end of the book one finds a good description of the effects of a cholera epidemic on the population of unsanitary Naples. In connection with these novels mention should be made of the touching last chapters, so brilliantly written, in Hemingway's "A Farewell to Arms." Seldom has an author drawn a word picture of a hospital and childbirth with more power of visualization. In spite of some defects, this story sets a new standard of description by the use of conversation limited to the fewest possible words. Hemingway is the son of a physician.

For those who fail to find pleasure in the modern novel, in spite of its being one of the best methods of depicting our times, there are many other new books of medical interest. That strange character, combining science and religion, a true product of the early seventeenth century, Stephen Hales, should be classed as second only to Harvey as the founder of the modern science of physiology. A country parson, in a small corner of England, carried on, alone and unaided, his extraordinary researches on blood pressure, setting an example of the use of the scientific method of investigation at a time when most men's

thoughts were turned in other directions. It must have taken more than ordinary courage, in 1709, to tie a mare to a common field gate, cut open the crural artery, put in a brass pipe connected with a glass tube, and watch the blood rise to nine feet. Mere observation was not enough for the "worthy and good" parson of Teddington, but he must also calculate the output of the heart, measure the pulsation, estimate the venous pressure and make numerous other experiments. Although we honor Hales as the first to correctly appreciate the blood pressure, we should not forget his work on botany or his inventive ability, which he turned very largely to the construction of artificial ventilators for buildings—unheard of before his time. His biography, by one of the physicians to the London Hospital, is a rich storehouse about the man and his time.

Long before Hales' time, however, medicine had its beginnings and an evening spent with primitive man is not without pleasure. One learns that before the First Dynasty (c. 3400 B. C.) of Egypt, the dead were buried in dry sand and so perfectly has nature preserved remains that even now "it is possible to examine anatomically the soft and perishable parts of the body and to ascertain the nature of the food they ate by scrutinizing the contents of the alimentary canal." Barley and millet have been identified, as well as fish, for the predynastic Egyptians made and used metal fishhooks. It is thought that the wonderful phenomenon of natural preservation in Egypt must have led later to attempt to preserve by artificial means, by mummification, an art which reached the high stages of its development by the time the Pyramids were built. The art of making mummies is of great interest. The brain was removed, piecemeal, through the nose; the Egyptians had no idea of its importance as the heart was considered as the seat of the intelligence. The viscera were taken out through an incision in the left flank, the thoracic contents, except the heart, which was always left *in situ*, by opening the diaphragm. The viscera were preserved in four Canopic jars, or returned to the abdominal cavity. The body, except the head, was then immersed in a salt bath for many days. These, and many other details, form an interesting chapter in Dawson's new book on the beginnings of medicine. But perhaps one would rather read about the *modern* dance of death,

so skillfully depicted by Peyton Rous. We know so little about the science of dying, in spite of all we have learned about the art of living. Rous points out that "the Dance of Death has lengthened, the music has turned sweeter, Death has become less boorish, his partner not so passive, but the measure is still the same, still the only one that the human organism has proved able to tread." The ultimate limit of life has not extended the least fraction of a year, so, in time, Rous presumes "the search for an elixir of life will be resumed more avidly than ever." This little book, full of wisdom and common sense, deserves wide reading.

"Education begins the gentleman, but reading, good company, and reflection must finish him." What better "good company" than good books?

Deeping, Warwick: Roper's Row. New York: Knopf, 1929.

Young, Francis Brett: My Brother Jonathan. New York: Harper, 1928.

Young, Francis Brett: Black Roses. New York: Harper, 1929.

Hemingway, Ernest: A Farewell to Arms. New York: Scribner, 1929.

Clark-Kennedy, A. E.: Stephen Hales, D. D., F. R. S. Cambridge (Eng.): University Press, 1929.

Dawson, W. R.: Magician and Leech. London: Methuen, 1929.

Rous, Peyton: The Modern Dance of Death. Cambridge (Eng.): University Press, 1929.

N. E. J. of M., December 26, 1929.

Personal and News Items

Dr. Mareus T. Smith and daughter of Conway were visitors in Little Rock last month.

Dr. S. D. McGill of Camden recently visited in Little Rock.

Dr. Ernest W. Prothro has moved from Fort Worth, Texas, to El Dorado, Arkansas.

Dr. G. A. Warren of Black Rock recently visited in Little Rock.

Dr. Charles R. Moon, Little Rock, has been appointed health officer for Little Rock.

Dr. A. B. Williamson of Aplin has moved to Beech Grove.

Membership in the Arkansas Medical Society costs \$5.00 a year.

Dr. W. W. York of Ashdown was operated upon at the Texarkana Medical and Surgical Clinic, December 25, for acute appendicitis.

Dr. D. W. Goldstein, wife and daughter of Fort Smith were visitors in Little Rock last month.

The next annual meeting of the Arkansas Medical Society will be held in Fort Smith, May 6, 7 and 8, 1930.

Dr. L. J. Kosminsky of Texarkana has recently returned from a visit to St. Louis and Little Rock.

The State Medical Board of the Arkansas Medical Society announce that license have been issued to the following physicians:

Ernest I. Shaw, C. McD. Smith, Carl A. Rosenbaum, Floyd S. Dozier, Harold W. Griffin, Isaac B. Hunt, Chas. G. Martin, Thomas C. Moody, Wm. T. Tillery.

Dr. and Mrs. F. P. McGehee of Lake Village announce the marriage of their daughter Minnie, to Dr. J. H. Burge of Lake Village. The wedding took place December 20, at the home of the bride.

If you wish to read a paper at the next annual meeting at Fort Smith, May 6, 7, and 8, 1930, write Dr. R. J. Calcote, Chairman, Committee on Program, Donaghey Building, Little Rock.

At a recent meeting of the Pulaski County Medical Society the following officers were elected for the ensuing year: President, Pat Murphey; Vice-President, H. Fay H. Jones; Secretary, E. H. White (re-elected); Treasurer, Wm. R. Bathurst (re-elected).

The Searey County Medical Society, at its regular meeting held December 27, 1929, elected the following officers for the ensuing year: President, W. W. Heard, Marshall; Vice-President, J. A. Henley, Marshall; Secretary-Treasurer, Sam G. Daniel, Marshall; Delegate, E. W. Wood, Marshall.

MARRIAGE—Dr. William A. Kriesel to Mrs. Maude Davis Hurley, both of Little Rock.

Dr. J. C. Gilliam has moved back to Des Arc after a short stay in Fort Smith.

Dr. A. A. Hughes of Pine Bluff announces the removal of his offices to suite 510-511, Simmons National Building. Practice limited to diseases of the eye, ear, nose and throat.

Dr. Morgan Smith of Little Rock will seek the nomination for lieutenant governor in the Democratic Primary next August. He said he will make a detailed announcement of his platform within the next few months, and that its principal features will be rigid economy and strict observance of the constitution in the administration of all governmental affairs.

A regular meeting of the Sebastian County Medical Society, December 10, 1929, the following officers were elected for the ensuing year: President, J. H. Buckley; Vice-President, Vogel Jeffery; Secretary, A. A. Blair; Treasurer, W. R. Brooksher, Jr. (re-elected). All officers are of Fort Smith.

The College of Surgeons' film, "Infections of the Hand," was presented to a large audience, including some fifteen out-of-town guests.

Dr. W. F. Smith, District Surgeon, Missouri Pacific Hospital Association, Little Rock, announces the annual meeting of the local surgeons of the Missouri Pacific Lines on the Southern District, February 17, 1930, in Little Rock.

There will be surgical, medical, x-ray, and pathological clinics held at the Missouri Pacific Hospital, beginning Monday morning at 9:00 o'clock. Luncheon will be served at 12:30 o'clock at the hospital.

There will be a scientific session in the afternoon from 1:30 to 5:00 at the Hotel Marion, at which meeting papers will be read and discussed. There will be a banquet at the hotel at 6:00 o'clock. This will give everyone time to return home on the early night trains.

The Saline County Medical Society elected the following officers for 1930: President, Dewell Gann, Sr., Benton; Vice-President, E. A. Buckley, Bauxite; Secretary-Treasurer,

T. E. Buffington, Benton; Delegate to the State Society Meeting, Thomas C. Watson, Benton; Alternate, W. W. Ward, Alexander.

At a meeting of the Board of Managers of the Arkansas Tuberculosis Sanatorium January 8, Dr. F. P. Baker, Superintendent of the Eastern Oklahoma State Sanatorium, was appointed superintendent of the Arkansas institution to succeed Dr. John Stewart, who died recently.

Dr. Baker was connected with the local institution for two years before the World War and returned after the war, serving until about two years ago, when he went to Oklahoma.

Judge Joseph Hill of Fort Smith, Chairman of the Board, announced that the building program recently launched will begin at once. Two new buildings, one a hospital to exceed in size any now at the sanatorium, will be started within the next few days. One will be dedicated to Dr. Stewart and the other to Dr. George S. Brown, member of the board for fifteen years, who died May 11, 1928.

The board is composed of Judge Hill, Dr. A. C. Shipp of Little Rock, Dr. Charles S. Holt of Fort Smith, J. F. Loughborough of Little Rock, Hamp Williams of Hot Springs and W. K. Oldham of Lonoke.

Communications

Dr. William R. Bathurst
Secretary,
Arkansas Medical Society,
814 Boyle Bldg.,
Little Rock, Arkansas.
My Dear Dr. Bathurst:

I want to thank you for your Christmas Greetings and for your Certificate of Membership in the Arkansas Medical Society.

My wishes are the best for your Association and please accept my personal regards and best wishes for all that is good and great for the oncoming year.

Faithfully,

J. W. Kennedy.

The Joseph Price Hospital, Philadelphia.

In Memorium

We, the members of the Woman's Auxiliary to the Faulkner County Medical Association, wish to extend our sympathy to Dr. G. L. Henderson and family who mourn the loss of their beloved wife and mother, Mrs. Leotta Traxell Henderson.

In their hours of loneliness and grief, we commend them to one "who doeth all things well," is an ever present help in times of trouble, and who will fill an aching heart with his love and presence.

In her death we have lost a valuable and highly esteemed member.

Respectfully submitted,
Mrs. J. S. Westerfield,
Mrs. H. E. Cureton,
Mrs. I. N. McCollum.

Dr. Add A. Evans was born 1877, and died at Bald Knob, November 28, 1929. He attained his medical education at the University of Arkansas, School of Medicine, and at the Memphis Hospital Medical College, graduating in 1901.

Dr. Evans practiced medicine for several years in Independence County and was a member of the Independence County Medical Society. For the past several years he has practiced at Bald Knob and has been a member of the White County Medical Society.

During his residence at Bald Knob many compliments have been paid him by his patients, praising his ability as a physician, and his medical friends always found him to be ethical.

Let us spread the mantle of charity over the things in his life that were not perfect (Who among us is?) and remember him for his many good deeds.

BE IT RESOLVED, that a copy of this MEMORIUM be furnished the bereaved family and a copy kept by the Secretary in the book of minutes of this Society.

E. H. Abington,
J. E. Jones,
Sam J. Allbright,
Committee.

Approved by the White County Medical Society at its regular monthly meeting, January 2, 1930.

Crawford M. Peeler, M. D.
President.
F. P. Hardy, M. D.
Secretary.

Obituary

STEWART, JOHN—Dr. John Stewart of Booneville, Superintendent of the Arkansas State Tuberculosis Sanatorium for the past sixteen years, died in a hospital at St. Louis, January 3, 1930. Aged 60. He suffered an injury several months ago, while riding a horse, which caused his death.

When Dr. Stewart assumed charge of the Sanatorium it had a capacity of 82 patients and today it cares for 350 with an addition proposed which will be able to serve about 120 additional.

He is survived by his wife, a son, Louis, and a daughter Margaret.

BRADLEY, ADAM ROBERT—Dr. A. R. Bradley of Morrilton died January 6, 1930. Aged 65. He suffered a fall at his home December 28, which caused internal injuries, the seriousness of which was not realized until a few hours before his death.

Dr. Bradley has been prominent in business and civic affairs of Morrilton for the past twenty years.

He graduated in medicine from the Memphis Hospital Medical College, and took post-graduate work at Johns Hopkins Hospital, Baltimore, and at Bellevue Hospital, New York.

Surviving are his wife, and two daughters, Mrs. Arthur W. Lavasque of Fort Smith and Mrs. Harold Vance of Shreveport, Louisiana.

JELKS, JAMES THOMAS—Dr. J. T. Jelks of Hot Springs died in California, January 5, 1930. Aged 49. He is survived by his wife, two daughters, Mrs. Harry Weimer and Miss Isabelle Jelks, all of Hollywood.

County Societies

CRAIGHEAD-POINSETT SOCIETY

(Reported by THAD COTHERN, Sec.)

The Craighead-Poinsett Medical Society met in regular session December 5, 1929, in dining room of the Noble Hotel, Jonesboro.

The committee appointed at the last meeting to draw up resolutions in memory of Dr. Walker made the following report:

IN MEMORY OF DR. WALKER

Our beloved member, Dr. Benjamin F. Walker, died November 16, 1929.

Dr. Walker had a stroke of hemiplegia in March, 1925, and had been helpless ever since. His mind was very active until within the last few days preceding his death.

He was born near Raleigh, N. C., April 26, 1870. He moved with his parents when an infant to Gibson County, Tennessee, where he grew to young manhood, at that time the family came to Arkansas and settled at Paragould.

He attended the Thompson Classical Institute, and taught in the public schools of Greene County for several years. Finally, he took up the study of medicine and spent his first years in the Medical College at Sewanee, Tennessee. He graduated from the Memphis Hospital Medical College and began practice at Blytheville, Arkansas. Within a few months he moved to Nettleton, where he remained until 1918, moving to Jonesboro.

In 1906, he was married to Miss Emily Hayes of Van Buren, Arkansas, who survives him, as does his daughter, Aliee Z., and son Benjamin F.

Dr. Walker was a man of high ideals and of a very sympathetic, tender, emotional nature. A cry of distress or pain appealed to him with such force that self was forgotten. His last years were truly a living sacrifice to his work.

"The long, lean hands are folded, and the rest He earned, lies sweet upon him: all the wise, Sane life, the helpful word, the ready jest, Departed with the light from his kind eyes. Emancipated from all need of care, He still took cares upon him for the joy of doing.

'Make me useful' was his prayer."

Of him it can truly be said that he laid down his life for those whom he served.

Respectfully,

R. W. RATLIFF,
J. C. HOWELL,
THAD COTHERN,
Committee.

A motion was made and carried that a copy of the report be spread upon the minute books of the Society, a copy be sent to the family, and copies be sent to the Journal of the Arkansas Medical Society and the local papers for publication.

The Board of Directors for the Physicians' Business and Credit Rating Bureau having been selected a meeting of the Board was called for December 10.

The next order of business was the election of officers for the ensuing year, which resulted as follows:

President, Chas. H. Lutterloh, Jonesboro; First Vice-President, J. L. Baird, Marked Tree; Second Vice-President, Ralph Sloan, Jonesboro; Treasurer, J. M. Jernigan, Jonesboro; Secretary, Thad Cothern, Jonesboro (re-elected); Censor, J. W. Elders, Harrisburg.

As the State Society dues had been raised, to be effective the coming year, a motion was made and carried that the county dues be \$7.50. Many present paid their dues for 1930.

Among the out-of-town physicians present were: Elders, Harrisburg; McDaniel, Tyronza; McCurry, Cash; Majors, Paragould; Ellis, Monette, and Attorney McMullien of Tyronza, who was a guest of the Society.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The regular meeting of the Mississippi County Medical Society was held at Oseola, December 12, 1929. Present: Washburn, Sheddan, Hudson, Tipton, Saliba, McDaniel, Morris, McCall, Polk, Husbands, Harwell and Smith.

Officers elected for the ensuing year were as follows: President, N. B. Ellis, Wilson; Vice-President, J. T. Polk, Keiser; Secretary-Treasurer, F. D. Smith, Blytheville (re-elected); Censor, P. L. Tipton, Blytheville.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec.)

The first meeting of the Mississippi County Medical Society for the New Year was held at Luxora, January 7. The new President, Dr. N. B. Ellis, was installed.

Present: N. B. Ellis, C. M. Harwell, J. A. Saliba, T. F. Hudson, P. L. Tipton, T. N. Morris, W. S. McCall, A. M. Washburn, J. R. McDaniel, and F. D. Smith.

The following scientific program was rendered:

"Meningococoeus Meningitis, With Report of Case," by Dr. C. M. Harwell.

"Spinal Anesthesia," by Dr. J. R. McDaniel.

LAWRENCE COUNTY

(Reported by J. H. STIDHAM, Sec.)

The Lawrence County Medical Society held its regular monthly meeting December 10, 1929, with Dr. T. C. Neece, Walnut Ridge.

Members present: Hatcher, Guthrie, Neece, Robinson, McCarroll, Stidham, Neece, Land, Hughes, Swicord, Smith and Downen. Guests were Drs. W. W. Jackson and R. M. Jernigan of Jonesboro.

The following officers were elected for the ensuing year: President, T. C. Guthrie; Vice-President, J. C. Hughes; Secretary, H. R. McCarroll; Censor, W. W. Hatcher.

After the election of officers and the business session the members and guests were invited to the home of Dr. Neece where a delicious luncheon was served by Mrs. Neece.

"In conclusion, I feel that this narrative must have sounded its share of discordant notes and revealed a melancholy outlook. I feel as I end it, like the ghost at a feast. To arraign even lovingly the faults and failings of the profession we venerate breathes the air of ungratefulness. There is something unpleasant about the actor that plays the character of filmy nothingness. The part calls for a stalking grimness, a seeming lack of substance, a cold clamminess and always one must be pointing—always pointing—at the foibles of the other guests, with a sort of bony finger from a hand that none can grasp. But ghosts have slain their Macbeths—although not directly. To have given some of the views of this

recital has cost me some grief and sorrow, and not a little perturbation. Had I not had affection for over thirty years for the medical profession and am ever jealous of its honor, I could never have tried to mirror some of my own inconsistencies. We must always to our own selves be true and be courageous enough to examine ourselves, as we are frank about confessing our errors in the performance of our duties. So I believe the several things I have related to have some part in our unrest. My judgment is anything but infallible, but there the matter rests. To us, the man to be feared is the one who says, "Always with a smile" and that all our ills will eventually right themselves. To us, he is an incubus.

We may be in for a period of partial eclipse, but be that as it may we can always count on enough hardy souls to affect a renaissance. We may be too deeply involved in some of our obsessions to extricate ourselves at once. We may see state medicine, although I strongly doubt it. We may see our hospitals, our work and our followings taken from us and controlled by large units. I doubt that too.

Notwithstanding the character of what has gone before, our great passion is that the medical profession, taking it by and large, is the greatest intelligent unit in civilization today. The purport of this whole paper is a deep chagrin at our not being the chief controlling factor in the world's affairs. It appears to me that we alone seem to understand the meaning of humanity. In modern dramas and in present day literature it seems to me that it is the medical man when he appears who alone has a great compassion and understanding for all the other characters.

Picture a world if you can where all the doctors of today, ministering as they are at this very hour, were suddenly eliminated, and in their place were machine-like personages that sought from files and indexes the precise methods of approach, with personality eliminated. It is unthinkable. When the crucial time comes, if it ever does, I feel that the great medical solidarity will be found with capable leadership in the perfected organization of a greater and more unified American Medical Association; that industrial interference will come and go; contract practice appear and disappear, and State medicine attain a growth only to sicken like a weed. Medicine is too old a custom for anything to long stop its progress, arise what may, for nature and evolution, pro-

gress and civilization have embraced medicine as a brother of their blood. You can no more block it now or change its destiny than you can that of existence. Medicine has become a very member of the integral body of life itself. The martyrdom of all the great figures of its past has seen to that. Concentrate on it as you may it will ultimately appear unseathed, for there is something indestructibly valid about it. Unfaithful as some few of its followers may be to the meaning of its finer truths, all will subscribe to its authenticity. To those who have embraced it, some sense of immortality surrounds it. Hardened as any doctor may become to its altruistic prophecies, he never seems to lose a clinging sense of its subtle proofs of some where having a great destiny. What else can so subscribe? I know of nothing. So on this rock we found our hopes and yearnings. Whatever happens, back we will come, stronger, more vibrant, more invincible, more powerful than ever, led, it may be, by some great voice from amongst us filled with the intense clairvoyancy of Descartes, and proving that he was right when he said:

If ever the human race is lifted to its highest practicable level intellectually, morally and physically, the medical profession will perform that service.

—Robt. Emmett Farr, A. M. A. Bulletin, December, 1929.

The Influenza Discover (?)—With little if any apparent warrant, it is again announced, for at least the tenth time in five years, that the causative organism of influenza has been discovered and that it is hoped to prepare a vaccine. There is thus far little or no evidence to indicate that I. S. Falk, Ph. D. and his associates have progressed any further toward the solution of this problem than have workers in other parts of the world, now or in the past. (Jour. A. M. A., December 21, 1929, p. 1975).

Book Reviews

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume 8, number 5. (New York Number—October, 1928) 293 pages with 141 illustrations. Per Clinic year (February, 1928 to December, 1928.) Paper \$12.00; Cloth \$16.00. Published by W. B. Saunders Company, Philadelphia.

Nineteen contributors are represented in this issue of the Surgical Clinics of North

America. The first number is by Dr. F. W. Baneroff, Fifth Avenue Hospital, New York, which pertains to acute appendicitis with a reference to the advances in treatment during the last ten years and the possible progress for the ensuing ten years. Of special interest is his description which pertains to the peritonitis cases with pelvic collections which has proven to be a very satisfactory procedure.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, with a collaboration of Chas. H. Mayo, Rochester, Minn. Volume IV. Thirty-Eight Series, 1928. Published by J. B. Lippincott Company, Philadelphia.

In addition to the subjects of "Diagnosis and Treatment," "Surgery," "Dermatology," "Medical History," Medical Biography and Medical Questionnaire" we particularly wish to comment on the first seventy-eight pages that pertain to "Aging and Old Age." The subjects considered are: Treatment of Arthritis Deformans of the Hip, Concerning Certain Phases of Angina Pectoris, Digestive Problems in old Age, and Postponement of the Individual Processes of Aging.

The Neuroses. By Israel S. Wechsler, M. D., Associate Professor of Clinical Neurology, Columbia University, New York City. Octavo of 330 pages. Published by W. B. Saunders Company, Philadelphia. Price, Cloth, \$4.00 net.

The views expressed in this work are based on clinical experience derived from active contact with patients, supplemented by the study of normal and abnormal psychology. The author discusses other medical conditions which may lead to diagnostic errors.

The Nose, Throat and Ear and their Diseases: In Original Contributions by American and European Authors. Edited by Chevalier Jackson, M. D., Professor of Bronchoscopy and Esophagoscopy in the University of Pennsylvania, in the Jefferson Medical College, and in the Graduate School, University of Pennsylvania, and George M. Coates, M. D., Professor of Otology, Graduate School, University of Pennsylvania. Assisted by Chevalier L. Jackson, M. D., Assistant in Bronchoscopy and Esophagoscopy, University of Pennsylvania. Octavo volume of 1177 pages with 657 illustrations and 27 inserts in colors. Published by W. B. Saunders Company, Philadelphia. Price, Cloth, \$13.00 Net.

The aim of this excellent and useful work is to present the opinion of today rather than the development stages by which that opinion has been reached.

Diseases of the Chest and the Principles of Physical Diagnosis, by George W. Norris, M. D., Professor of Clinical Medicine in the University of Pennsylvania, and Henry R. M. Landis, M. D., Professor of Clinical Medicine, University of Pennsylvania; Director of the Clinical and Sociological Departments of the Henry Phipps Institute of the University of Pennsylvania, with a chapter on the Transmission of Sounds Through the Chest, by Charles M. Montgomery, M. D., and a chapter on the Electro-cardiograph in Heart Disease, by Edward Krumbhaar, Ph. D., M. D. Fourth Edition, Revised. 954 pages with 473 illustrations. Published by W. B. Saunders Company. Cloth \$10.00 net.

"Examination of the Lungs" constitutes the first 12 chapters. Part 2, "The Examination of the Circulatory System;" Part 3, "Diseases of the Bronchi, Lungs, Pleura and Diaphragm;" Part 4, "Diseases of the Pericardium, Heart, and Aorta."

Modern Methods of Treatment. By Logan Clendenen, M. D., Professor of Clinical Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's Hospital, Kansas City, Missouri, with chapters on special subjects by H. C. Anderson, M. D., J. B. C. Cowherd, M. D., H. P. Kuhn, M. D., Carl O. Rickter, M. G., F. C. Neff, M. D., E. H. Skinner, M. D., and E. R. DeWeese, M. D. Third Edition. Published by The C. V. Mosby Company, St. Louis. Price, \$10.00.

This book furnishes an outline of all the methods of treatment used in internal medicine, and described so clearly that a person who has never seen it performed could do it from the description. The first part describes the procedure and part two gives the indications for its application, based upon the principles of physiological pathology.

Clinical Electrocardiograms: Their Interpretation and Significance by Fredrick A. Willius, M. D. Section on Cardiology, The Mayo Clinic, Rochester, Minnesota and Associate Professor of Medicine, The Mayo Foundation, University of Minnesota. Quarto of 219 pages with 368 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, \$8.00.

The author of this book presents clinical electrocardiography in a graphic manner, and illustrations are shown that may aid those whose experience in this field is limited.

Thrombo-Angiitis Obliterans—Clinical, Physiologic and Pathologic Studies. By George E. Brown, M. D. and Edgar V. Allen, M. D., Division of Medicine, Mayo Clinic, Collaborating in Pathology with Howard R. Mahorner, M. D., Fellow in Surgery, The Mayo Foundation. 12mo of 219

pages with 62 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, \$3.00 net.

This work opens with a foreword by Dr. L. G. Roundtree which states that that "Broad and continuous clinical contacts, together with special interest in and special knowledge of any branch of medicine, afford unusual opportunities for the development of clinical judgment and for improvement in diagnosis and in treatment.

The author's study is based on "the observation of more than 300 cases of thromboangiitis obliterans in The Mayo Clinic in the years 1922 to 1927 inclusive. Each year the number of such cases recorded at The Mayo Clinic increases; at present the ratio of patients with this disease to all males registering is approximately 1:400. Fifty amputated specimens were studied pathologically, twenty-seven of which were studied by Mahorner."

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, M. D., A. M., Philadelphia, with a collaboration of Chas. H. Mayo, M. D., Rochester, Minn. Volume 1. Thirty-Ninth Series, 1929. Published by J. B. Lippincott Company, Philadelphia.

This issue of the "Clinics" contains 300 pages of most interesting lectures. On page 219, describes several cases by Dr. Astley, P. C. Ashhurst of Philadelphia, illustrating the surgery of the blood-vascular system. The article is illustrated with interesting and instructive comments and conclusions.

Partnerships, Combinations and Antagonisms in Disease. By Edward C. B. Ibotson, M. D. (Lond.) B. S., Fellow Royal Society of Medicine, London. Illustrated. Published by F. A. Davis Company, Philadelphia. Price, \$3.50 net.

The author of this work attempts to put together some of the facts and theories concerning morbid alliances and antagonisms. He says that "our old inexact conception as to diathesis, infection, immunity, etc., have been revolutionized by researches and discoveries in physics, biochemistry, and bacteriology. Increasing knowledge of the endocrine glands, of the blood plasma and leucocytes, of the vitamins in food, of the vegetative nerve system, and of pathological chemistry; are all playing their part in our studies in immunity. Then there are age, sex, heredity, environment; including light and temperature. Environment

includes the study of symbiosis, acquired immunity, and tolerance to animal parasites and animal hosts. Then there is the important role now assigned to the subconscious brain and the power of suggestion in controlling cases; and there is the conscious brain with its processes varying through sex, education, heredity, environment, race and climate. And above all, as Haldane emphasizes in his recent work on physiology, is the greatly variable tenacity of life force.

The Surgical Clinics of North America (Issued serially, one number every other month). Volume 8, number 4. (Philadelphia Number—August 1928) 285 pages with 91 illustrations. Per Clinic year (February, 1928 to December, 1928.) Paper \$12.00; Cloth, \$16.00. Published by W. B. Saunders Company, Philadelphia.

They say that "patients with toxic goiter can usually be divided into two general classes: The first, and much the larger group, being those in whom the disease is only moderately advanced, and in whom thyroidectomy can be performed with practically no operative risk; and secondly, a much smaller group, who present a serious operative hazard either because of co-existing complications or, more frequently, because of dependent complications which can usually be attributed to prolonged thyrotoxicosis. In a general way this group is composed chiefly of:

First, patients who have suffered from their disease for a long period of time so that when they present themselves for surgical treatment they are malnourished, emaciated, and often prematurely senile.

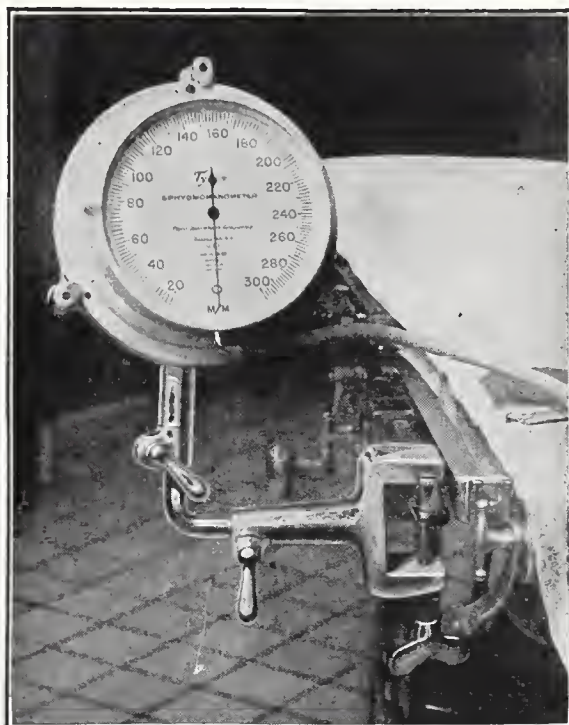
Second, those who, as a dependent complication, have severe cardiac damage.

Third, patients who are well past the prime of life when they develop the disease.

Finally, those patients who have some associated complication such as tuberculosis, nephritis or diabetes, which adds to the operative risk. Frequently several complications will be present in the same case. Hence, when the disease has been of long duration we rather expect to see more or less serious cardiac damage, etc."

You can always spot an inferior physician by his superior air.

—Bucks County, Pa., Medical Journal.



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Original Articles

CONDITIONS SIMULATING SCIATICA*

FRANCIS J. SCULLY, M. D.

Hot Springs National Park

During the last few years many patients have come to the office (1) stating that they were suffering from sciatica, in whom investigation would reveal other conditions which had simulated a sciatic neuritis. In making a diagnosis of sciatica or sciatic neuritis, we must satisfy ourselves that there is no disease of the hip joint, pelvis or spinal column, which might give rise to the symptoms. In this paper, consideration will be limited to those bone changes which have caused pain simulating sciatica.

By a true sciatica we mean an inflammation of the sciatic nerve involving the sheath and the nerve fibers more or less throughout the entire length of the nerve trunk. Sciatica may occur at any age, generally before 45 years of age. It is characterized by tenderness along the inflamed nerve trunk, especially where the nerve can be pressed against deeper unyielding tissues, most often noted between the sciatic notch and the back of the knee. The involvement is practically always unilateral. The pain varies greatly in intensity in different individuals. It may be present only on movement or may be unusually severe and persistent, radiating to the full extent of the nerve. It is aggravated by walking or by stretching the nerve by extending the knee with the thigh flexed on the pelvis. The pain usually clears up in a few weeks, but may persist for months. Where it has lasted more than eight or ten weeks and has not been relieved by the usual methods of treating a neuritis, a search for other conditions should be made. This is especially true in elderly patients

where sciatica is more likely to be persistent, but also where bony changes are more frequently found.

In making such a differential diagnosis we should first make a careful inquiry as to the onset of the illness, the radiation of the pain, the duration of the condition and any other symptoms present. Then a careful palpation of the hips, pelvis, and lower spine should be made to locate tenderness, swelling or grating on movement of the joints. An internal examination either by rectum or vagina should not be overlooked. Finally laboratory study, especially x-ray is a most valuable help, and should never be omitted in chronic cases.

Osteo-arthritis of the hip joint has been the most frequent condition we have found simulating sciatica, especially in patients past middle age. The pain is present in the hip and radiates to the thigh. However, the pain is more in the inner side of the thigh and knee, and there is no tenderness over the sciatic nerve trunk. Movement of the hip aggravates the pain. The range of movement is limited more or less in all directions, but especially in abduction. This can be demonstrated by having the patient attempt to straddle widely, when it will be noted that abduction is limited on the affected side. In sciatica, motion is free in all directions except on flexing the hip with the knee extended. Palpation reveals some local tenderness over the hip and grating on movement. There is a tendency to favor the affected joint so that the patient walks with a more or less decided limp. The condition is slowly progressive and there is increasing stiffness and disability. X-ray is the important diagnostic means, and clearly shows the bony thickening, the widening and flattening of the head of the femur and the lipping of the joint edges.

1. From the Clinic of Drs. Green, Fletcher & Scully.

Case No. 1. D. W. S., a man aged 57 years, complained of sciatic pain in the left side of only a short duration. The pain was not severe except

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

on bending the body or twisting the leg. Examination showed tenderness over the left hip joint with a limp favoring the left leg in walking. The x-ray showed an osteo-arthritis of both hip joints and the lower spine.

Osteo-arthritis of the spine was not seen so frequently as involvement of the hip joint. The pain is more limited to the lumbar region, though it may radiate to the hip and leg, simulating sciatica. There is gradually developing stiffness and rigidity. However, it is in the early stages before rigidity has become marked that it is more likely to be confused with sciatica. The pain is due to pinching or to inflammation of the nerve roots as they pass between the vertebrae. X-ray here reveals why this may occur. There is thickening of the processes and lipping of the joint edges. This bony change revealed by the x-ray, however, does not indicate the full extent of the inflammatory process which affects the ligaments and the muscle sheaths as well. Generally the pain is bilateral, but may be referred to the one side only.

Case No. 2. N. H., a woman aged 53 years, complained of discomfort in both legs, especially the left, for one year. The pain radiated mainly to the inner side of the thigh to the inner side of the knee. The pain was aggravated by bending the body rather than by movement of the hips. Examination showed tenderness over the lower lumbar spines and over the left sacro-iliac joint. There was no grating on movement of the hip joints and no tenderness over the nerve trunks. X-ray showed an osteo-arthritis of the lumbar spine.

Malignancy of the pelvic bones may cause a sudden appearance of pain in the distribution of the sciatic nerve and the condition be treated as such for some time before the true condition is diagnosed. A careful examination may show nodular growths and thickening of the pelvic bones. Rectal examination is important as the bone changes may be detected in some cases only by the internal examination. The presence of malignancy elsewhere in the body or a history of removal of a malignant growth is of importance. X-ray, however, reveals the bony involvement which may be quite extensive at the time the true condition is discovered.

Case No. 3. W. E. G., a woman aged 62 years, complained of pain in the right hip extending to the knee of nine months duration. With rest in bed the pain has been less severe, but has been practically continuous. A tumor was removed from the right breast three years ago. She had lost twelve pounds in weight. Examination showed no tenderness over the nerve trunks, but some soreness on pressure over the right hip. The pain was distributed to the inner side of the thigh.

The x-ray revealed a malignancy involving the right ilium above the acetabulum and a slight involvement of the pubic bone near the acetabulum.

In malignancy of the femur, where the involvement is in the upper part of the shaft, the pain may simulate sciatica very closely, and may cause difficulty in diagnosis in the early stages. Later, however, the enlargement of the bone can be made out and occasionally a dilatation of the superficial veins over the tumor may be noted. The x-ray shows the involvement of the bone.

Case No. 4. D. D. N., a woman aged 62 years complained of pain in the right leg for eight months, radiating to the knee. She had lost thirty pounds in weight. She had had an extensive course of osteopathic treatments for sciatica. Examination showed an enlargement of the upper part of the right femur. There were some enlarged lymph glands in the right inguinal region. The x-ray showed a malignancy of the upper part of the femur.

Patient with tabes will go for a long time complaining of sciatica before they have a complete examination. The pain is usually paroxysmal in character and is nearly always bilateral, which should be indicative of some other condition than sciatica. Occasionally the blood will show a negative Wassermann test, but other signs as absent knee jerks, Argyll-Robertson pupils, and a history of a syphilitic infection will aid in the diagnosis. Where trophic changes occur in the hip joints, such as a Charcot joint with gradually developing difficulty in walking, there may be some confusion.

Case No. 5. W. C. W., a man aged 41 years, complained of difficulty in walking developing in the past year. He gave a history of a luetic infection which had been treated rather vigorously. He had had considerable pain in both legs which had cleared up with the treatment. Recently he had been having some discomfort in the right hip with aching pains radiating to the knee. Examination showed no tenderness over the nerve trunks or over the hip. There was some swelling about the hip, but motion was free in all directions. The Wassermann test of the blood was negative. An x-ray showed a Charcot joint with marked absorption of the head of the femur and destructive changes in the hip joint. The pain was evidently due to the pull on the capsular ligaments when walking or standing. The pupils were unequal in size and did not react to light. The patellar reflexes were absent. The spinal fluid showed a positive Wassermann test.

Sacro-iliac disease may cause difficulty because of the involvement of the sciatic nerve as it passes near the joint. However, there is local tenderness over the sacro-iliac joint and the pressure on both sides of the pelvis increases

the pain. X-ray does not give much help. Generally there is a history of injury such as a sudden twist or wrenching of the back.

Case No. 6. G. F., a man aged 45 years, complained of sciatic pain on the left side of several months duration. There was no definite history of injury of the back. With rest the pain in the leg had improved, but the discomfort in the back continued. Examination showed local tenderness over the sacro-iliac joints, especially the left. Motion was free in the spine and hips, but aggravated the discomfort in the sacro-iliac joints. X-ray showed no disease of the bones or joint. During the acute stage there was evidently an involvement of the sciatic nerve as it passed the inflamed joint, which had cleared up with rest and treatment. In such conditions it is difficult to determine whether we are dealing with a primary sciatica, or a complication of some other condition. In this patient the continued soreness and discomfort in the sacro-iliac joint indicated it to be the seat of the underlying primary condition.

No attempt has been made to enumerate all the conditions that might simulate sciatica; but simply to point out that other conditions, often more serious, must be considered in making a diagnosis, and that x-ray is one of the most valuable aids in the differentiation.

DISCUSSION

DR. I. J. JONES, Little Rock: The doctor pointed out a number of conditions which are well illustrated by an x-ray examination as simulating sciatica. I have come in contact with one condition several times in a long practice in tropical and semi-tropical countries. I have seen several times a condition which very closely simulated sciatica, either caused by malarial infection or at least accompanying it.

I might detail one case very briefly that illustrates all the others. I had examined and treated a case for tertian malaria. On account of business affairs, I was compelled to absent myself for a period of three or four months. On my return I found that the patient had been treated by another physician for sciatica. But knowing about the malarial infection and the housing conditions of where the patient lived, I confess I did not make very much examination for a sciatic condition, but immediately examined the patient's blood for malaria and found that the infection still persisted, but there were no further malarial paroxysms nor did she have any elevation of temperature at this time. She was suffering intensely from pain in the region of the sciatic nerve. I re-established the treatment by quinine and the patient suffered no further from her supposed sciatica.

This is a condition that may confront any of us who practice in malarial countries.

DR. PRESTON HUNT, Texarkana: I don't feel competent to discuss this paper, but it occurs to me that those of us who gave it close attention should be very appreciative for the renewal of our thoughts and memories, and especially that part of it that diverted our minds to the fact that you cannot always make a diagnosis of any disease and especially of sciatica. The typical symptoms of sciatica sometimes may be simulated; but

if you follow out your mode of diagnosis, palpating and stretching the sciatic nerve, and do not get a response or reaction of your examination which is satisfactory, then we had better look further, as the essayist has directed, for some other trouble.

When we come to think of how intricate and how definite the roots of the spinal nerves and especially in the lower segments are disseminated, to what points they carry their messages or impulses, it isn't difficult to realize that we can often be confounded in our diagnosis. Dr. Scully has brought to us a thought that is indeed more valuable than just the fact of making a definite, iron-clad diagnosis and that is to remind us once more of the importance and the value of extensive examinations and delving into our cases in a manner that might help us to avoid so many mistakes.

I certainly appreciate his constructive talk, his lecture and his pictures. They are very instructive to me; entirely too broad and too extensive for a discussion on the part of one man or of a dozen men within an hour. I thank you, Dr. Scully.

DR. SCULLY, in response: As there are so many causes of sciatica and conditions which may be confused with it, I tried to limit my paper to bone conditions only. As to the malarial neuritis mentioned by the doctor, we do see quite a number of such cases in which there is sciatica or neuritis and which we consider due to the toxic effects of the malaria. We make blood smears as a routine, but do not always find the parasite. We frequently give quinine when we do not get response to the salicylates, particularly in patients who give a history of malaria or are from malarial districts.

The point brought out by Dr. Hunt I tried to emphasize in the paper. Where you have sciatica or a complaint of sciatica with no tenderness over the nerve trunk, and you cannot demonstrate pain on pressure or stretching the nerve trunk, we must look further before we pin the diagnosis of sciatica on the patient.

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ORTHODONTICS, ITS AIMS*

CLARENCE W. KOCH, D. D. S., Little Rock

Dentistry like medicine has made rapid advances within the last quarter century. As in medicine, we have seen spring up in dentistry, specialties, such as, exodontia, orthodontia, pedodontia, etc. Time was when dentists frowned upon these divisions within their field of operation, but today their worth has been fully demonstrated and their necessity, in most instances, firmly established.

As a specialty, orthodontics offers some wonderful opportunities and possibilities, but it also presents many difficulties and responsibilities, all of which tend to make it a distinct branch in itself. It offers the opportunity of coming to nature's aid in the development of the face, to correct the malposition of the individual teeth, jaws or parts, making them the more harmonious with the rest of the face and, in some instances, with the aid of the surgeon, to rescue many otherwise unsightly conditions from the scorn of society. It demands of us a thorough knowledge of the conditions as they exist, and places upon the operator responsibility for the future harmonious and serviceable condition of the mouth as a unit and as a part of the whole.

Dr. Pitcock, who under the auspices of the Little Rock Federation of Women's Clubs, has been conducting dental examinations of children in the public schools, reports that out of 5,516 students examined during the school term of 1926-1927, 453 or 8 per cent of them, needed orthodontic treatment. This number he states represents only the more extreme cases. It might seem incredible, but most authorities agree that approximately 50 per cent of the children suffer with malocclusions. One authority, Dr. Abe Hoffman, goes so far as to say that 90 per cent of the children examined at the Forsythe Infirmary at Boston, recognized as an outstanding institution of its kind, needed orthodontic treatment. However, I feel that this might be somewhat exaggerated and I am inclined to accept 50 per cent as more nearly correct. If this is true, it is safe to say that there are approximately 2,000 children among the 5,516 Little Rock children examined, with malocclusions. The magni-

tude of the orthodontic problem is readily apparent.

The unfortunate thing about the whole situation is that a great many of these cases are due to neglect. Many of the simple cases advance to the difficult stage through carelessness, indifference, or ignorance of the growing deformity. What is more deplorable is the advice that they will straighten themselves, "Nature will take care of it." While it is true that occasionally nature does take care of it, only certain types of malocclusion correct themselves—about one out of every 200. Lischer says, "Every fact gleaned from a study of the process of dentition substantiates the orthodontic axiom that malocclusion and its accompanying deformities are progressive, not static. In short, the prognosis of malocclusion is equally as unfavorable as of caries of the enamel; the evil consequences are equally certain. The old adage, 'an ounce of prevention, etc.', is decidedly apropos to a consideration of malocclusions of the teeth." Another popular fallacy is that the corrective, or straightening process, should not commence until all the permanent teeth are in position. This too is a mistake, in proof of which many case histories might be submitted but time will not permit.

Sometimes parents of children with malocclusion are advised by their physicians or dentists to disregard the increasing malocclusion, assuming that the time for treatment is not at hand. May I say, that such advice is a mistake. There are many factors that determine the proper time for treatment. It would be an injustice to burden you here with the details thereof. Suffice it to say that as a surgeon must possess surgical judgment, acquired only by experience, to know when to operate and when not, so orthodontic judgment is a prerequisite, if malocclusions are to be corrected in the minimum length of time, and with the least amount of discomfort to the child.

How are we to prevent malocclusions? Sometimes we think we are practicing prevention by extracting deciduous teeth to "make room" for the permanent successors. While this may afford temporary relief, time will make us realize that this method, in most cases, is pure folly. If such practice is resorted to in a case where the jaw is much underdeveloped, it will only aggravate the condition, as the premature extraction of the

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

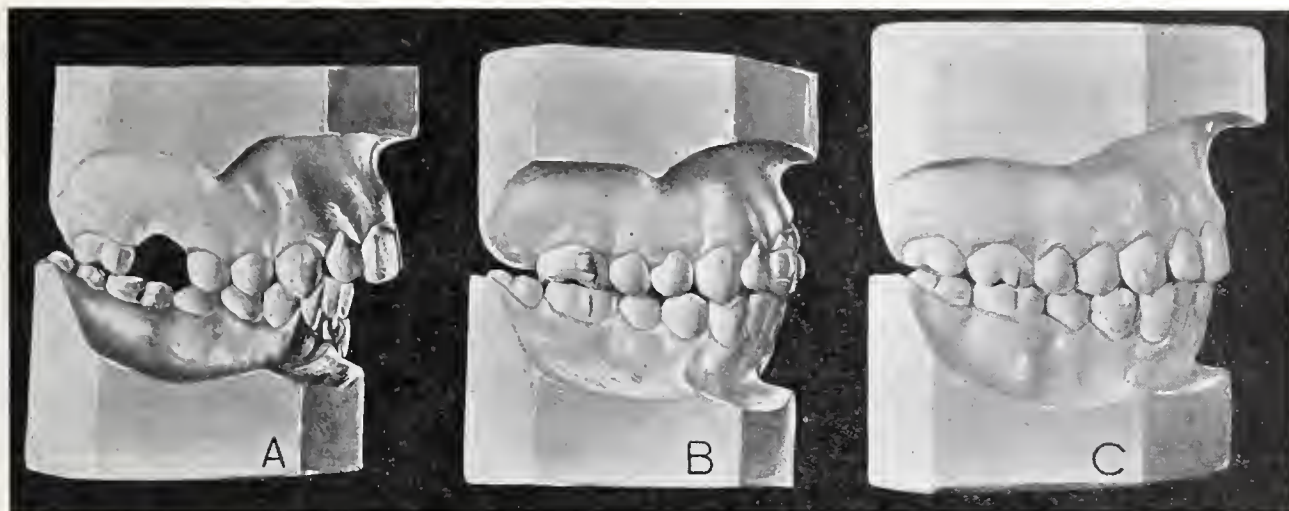


FIGURE 1—A of case 1 illustrates the loss of the upper right first molar as well as a protrusion of upper anterior teeth. B shows the second molar moved into the first molar space and correction of the protrusion. C shows the third molar in the second molar position and case completed.

tooth might cause further contraction of the arch. Such treatment might be comparable to the injudicious administration of pituitrin in labor.

Let us consider briefly the more important causes of malocclusions. There are many ways that they may be classified, but let us divide them into three general classes, viz: intrinsic, extrinsic, and unknown causes.

Intrinsic Factors are those that are due to certain inherent systemic influences, some of them being congenital and probably inherited, others not. Environment has nothing to do with these factors. Under this heading we have first, anomalies of number. A deficiency in the number of teeth allows the adjacent members to drift into abnormal positions. Hence, as soon as this condition is diagnosed, provision should be made for maintenance of this space, before the shifting of the teeth takes place. Occasionally, we have more than the usual number of teeth known as a redundancy, and may lead to a crowded condition or a general over-development of the respective arches. Second, in anomalies of position, there is a transposition of certain teeth, as for instance when the bicuspid and cuspid exchange places. Third, occasionally cases present with an abnormal frenum labium, producing a widened space (Diastema) between the central incisors. The fibers of the frenum are of sufficient density and its movement so constant, that it prevents the teeth from coming into normal contact.

The foregoing are all intrinsic causes, and cannot be prevented, but must be promptly recognized and dealt with in order to prevent their bad effect.

The *Extrinsic Causes*, on the other hand, can in the vast majority of cases be prevented hence knowledge of them will prevent many forms of malocclusions. Premature loss of temporary teeth occurs most frequently, but should be avoided wherever possible. This does not mean that infected deciduous teeth should be retained in the jaw. Rather caries should not be neglected until the pulp is involved. A child will not chew its food properly if it causes pain, and exposed pulps could certainly make it painful to chew. In a relatively brief period, the habit of bolting the food will be formed. What is the result? Faulty muscular functioning and development. The longer the malfunction persists, the more permanent the defect. As a preventative for this evil, all cavities should be filled, unless the time for normal exfoliation of the particular tooth is near at hand. Mothers should be advised against giving their children soft, mushy foods, but instead give them things that make them use their muscles, jaws, and teeth for the purpose which Nature intended them. The action of this compact arrangement of muscles, when normal, tends to hold the teeth and arches in their normal relation, and, at the same time, the teeth, when

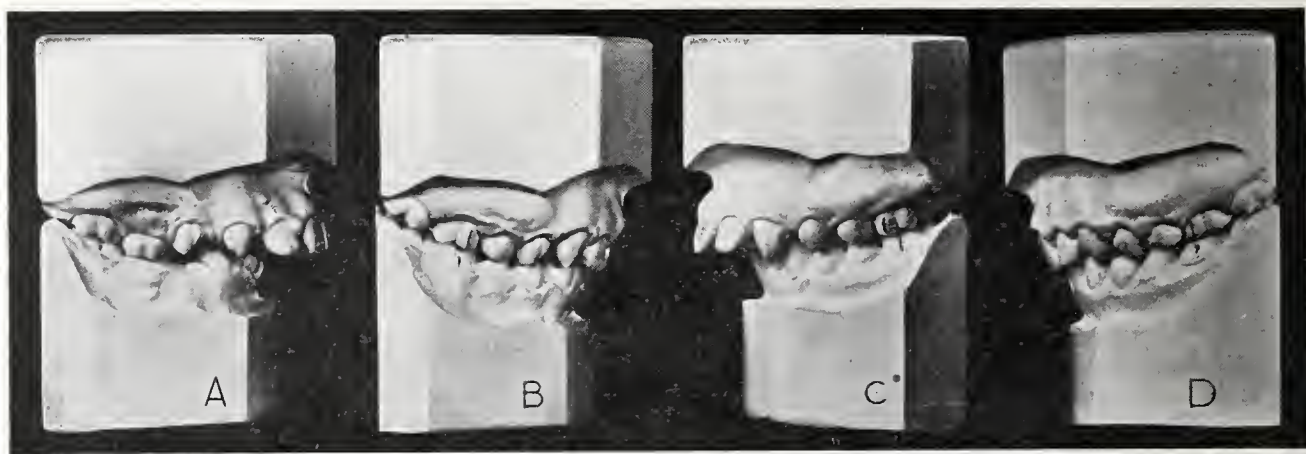


FIGURE 2. A and C illustrates condition of case 2 on first examination. B and D show results of treatment.

in their normal occlusion, offer the proper frame work over which the muscles may properly function. The reverse is equally true, and where muscles are not used normally, and where they do not function harmoniously they will invariably exert stresses, which if continued, will produce malformation of the osseous structures, to which they are attached, and over which they function. Oft times, in our zeal to preserve the integrity of the arch, we are tempted to allow questionable teeth or fragments of teeth to remain in position. This practice should be condemned. It is possible to retain the spaces created by the extraction. Certainly this is preferable to permitting a child to absorb these toxins and possibly setting up secondary foci of infection.

Premature Loss of the Permanent Teeth, especially the first or six-year molars, is almost certain to produce malocclusion. It is usually possible in such cases to move the second molar into the position occupied by the first, the third molar subsequently taking the place of the second. (See Figure 1).

Prolonged Retention of the Deciduous Teeth is also an extrinsic factor of malocclusion. The pressure thus exerted against the erupting tooth, even though very slight, is sufficient to deflect it from its course. Too, the greater width of the deciduous molar than the bipreolars that eventually take their place, will cause a crowded condition of the anterior teeth if they are retained beyond their normal time.

Nasal Obstruction, from whatever cause, adenoids, hypertrophy of the turbinates, de-

flected nasal septum, nasal polypi, or hypertrophy of the tonsils, should have immediate correction. Pullen, in his text on orthodontia states the following:

"Ziems experiments in producing nasal stenosis in young animals by occluding one-half of the nose artificially, with the result of the asymmetrical development of the two sides of the nose and adjacent bony tissues, the obstructed half being arrested in development, as well as the contiguous tissues on that side of the face, are worthy of note as proof of the correctness of the theory that nasal obstruction is causative of arrest of development in the human head and face."

Abnormal Muscular Habits, such as lip biting, tongue biting and thumb sucking should be immediately detected and corrected. These pernicious habits will greatly aid in the formation of a malocclusion, and if under treatment, will inevitably militate against successful results, and in many instances, may mean complete failure.

Unknown Causes. As in other diseases, the causes of many malocclusions are still unknown. Oft times we attempt to cloak our ignorance by ascribing some vague cause. In this connection, heredity and modern civilization have been worked overtime. I do not mean by this that they are not responsible for some cases. Wallace, very significantly says, "Knowing as we do, that thousands of Chinese skulls have been examined and only one trivial case of irregularity has been observed and knowing also that the Chinese belong to the most ancient civilization extant, and fur-

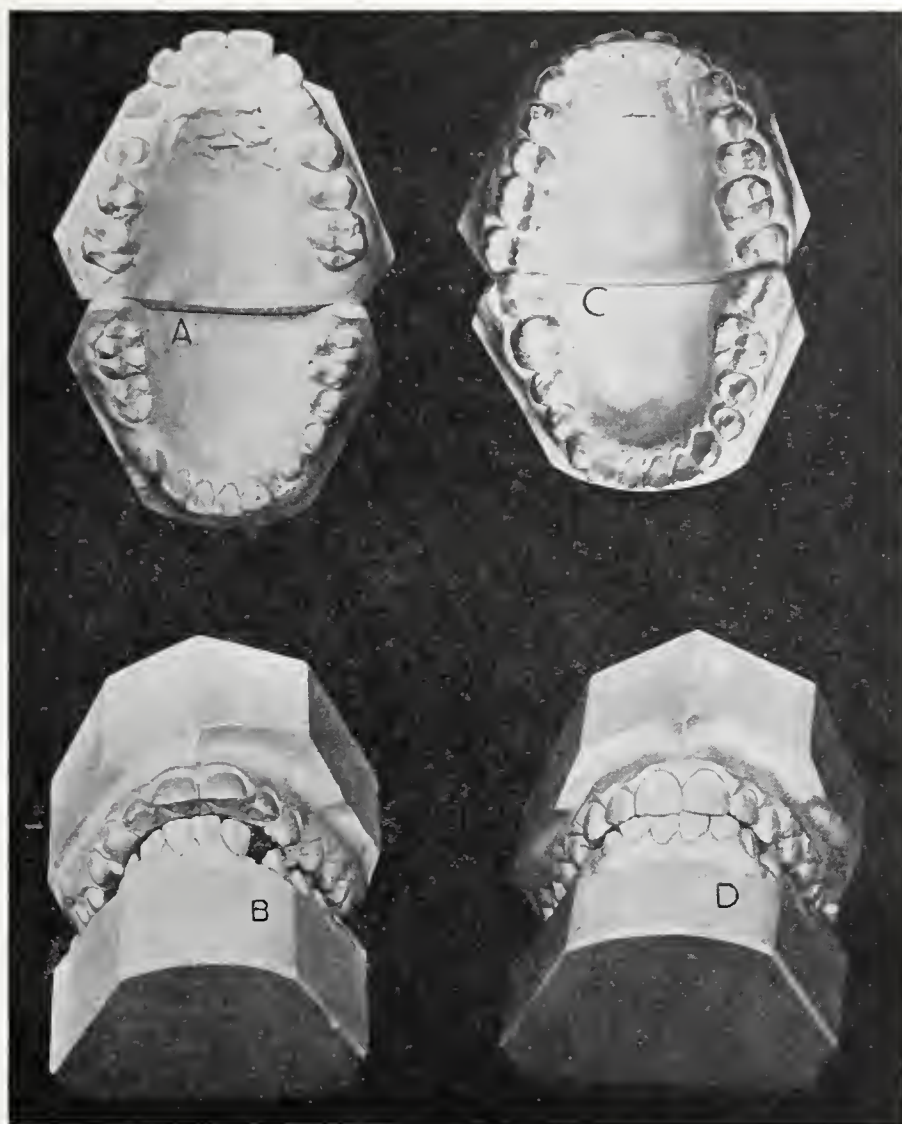


FIGURE 3.—A and B illustrates condition of case 2 on first examination. Note extreme overbite in B. C and D show result of treatment. Note correction of overbite in D.

ther, having been taught that irregularities are frequent among Hawaiians, we must be careful about laying too much credence on the idea that civilization is anything more than a frequent concomitant of irregularities."

The relationship existing between the endocrine glands and malformations of the maxillae are receiving an increasing amount of attention. If deranged function of the endocrines influences body growth generally, it is reasonable that it also influences the osseous structures of the jaws. It is too early to say at this time just what will come of it. However, many of the representative orthodontists of the nation are very hopeful of im-

portant results with endocrine therapy as an adjunct to orthodontic treatment.

In answer to the question, "Why is it so important that malocclusions be treated?" A great majority would answer, "For the sake of personal appearance." If there were no other reason for orthodontics, this one would be good and sufficient. The habits and poise of the child, and later the adult, are greatly involved. Would I be guilty of exaggeration if I should say that a pronounced facial deformity could produce an inferiority complex of such severity that its correction or neglect might spell success or failure for that individual.

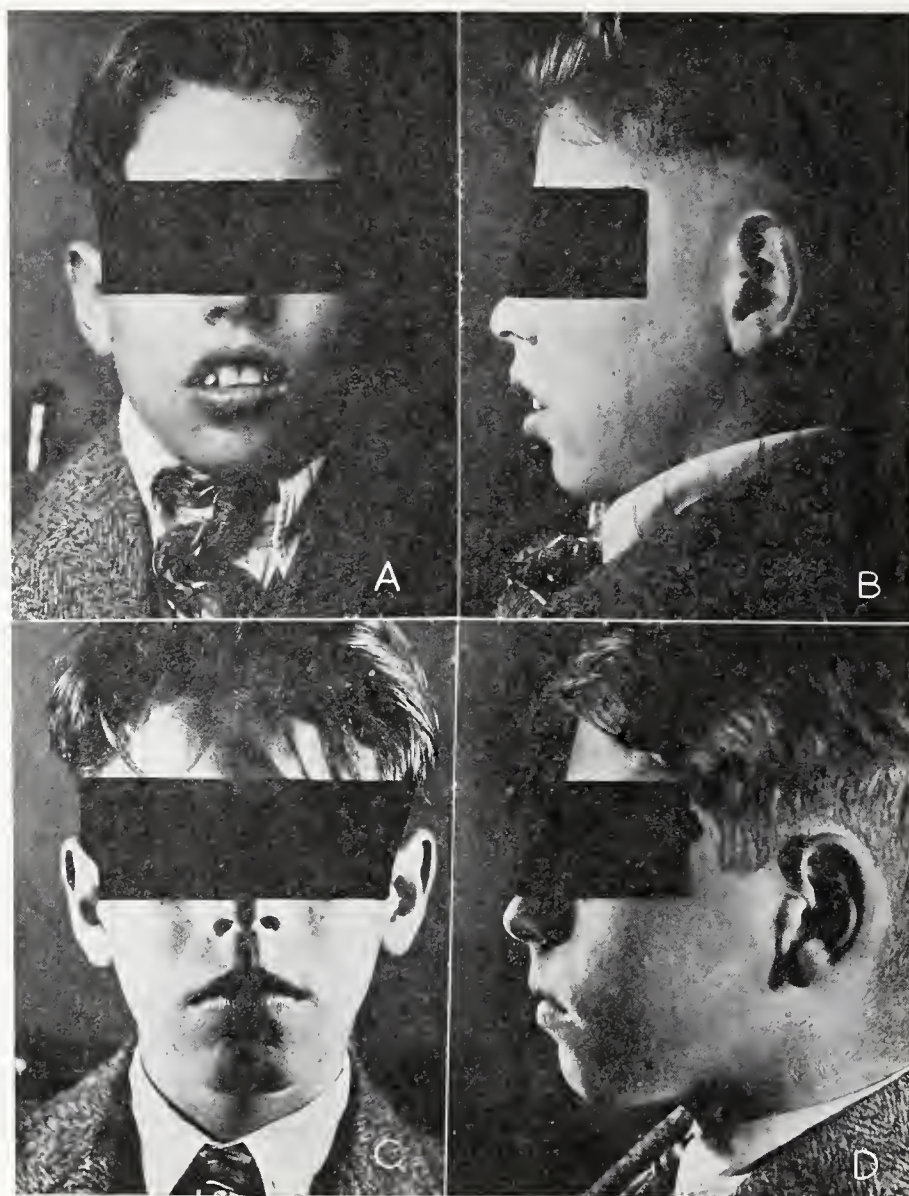
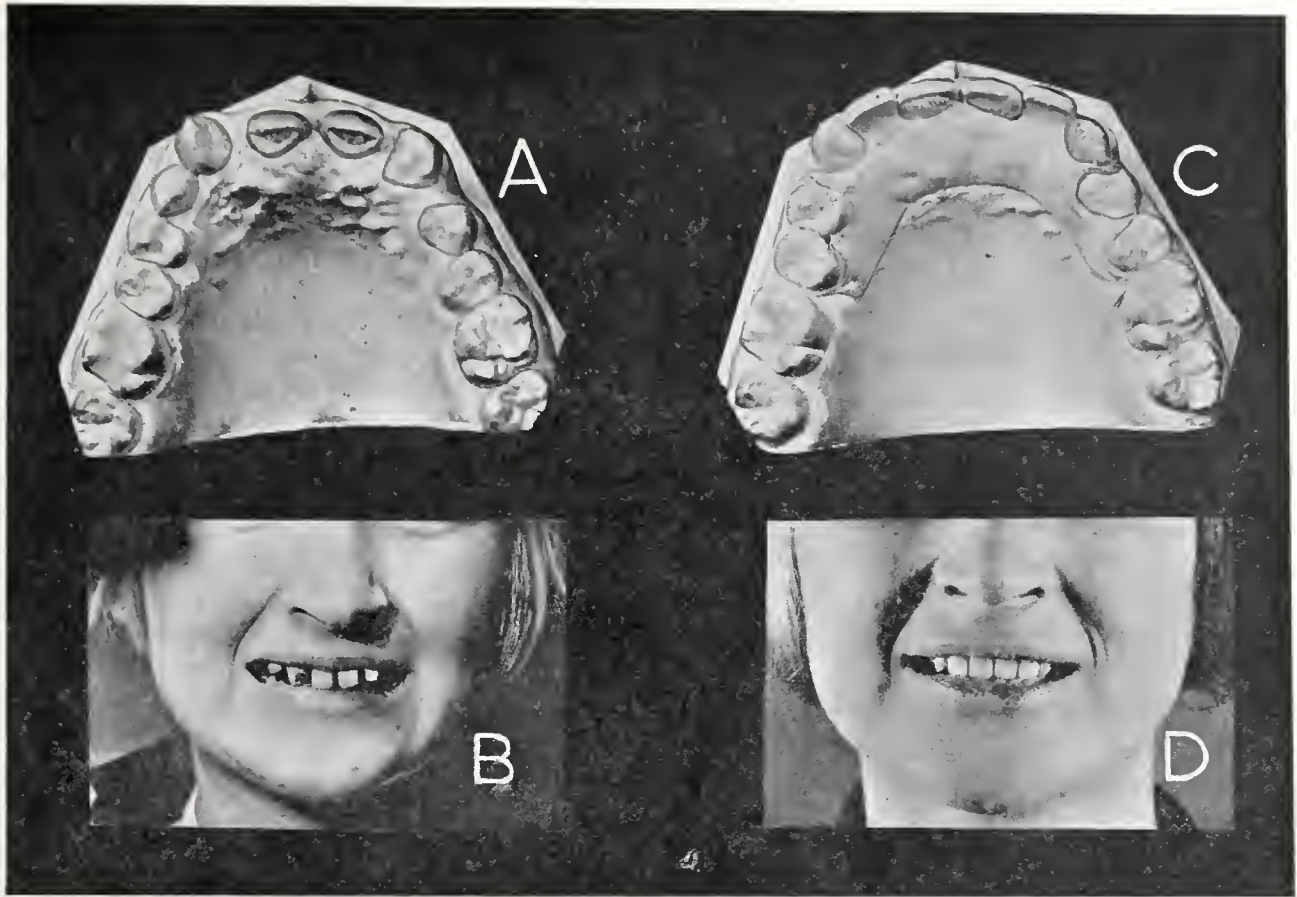


FIGURE 4.—A and B illustrates condition of case 2 on first examination. C and D show result of treatment.

The physical health of the individual is of even greater importance than the foregoing. The proper functioning of a normal denture as in mastication serves as a stimulus to the underlying and supporting structures of the teeth. While the articulation of the roots of the teeth with the alveoli is classified as a synarthrodial joint, yet there is a slight movement in attrition and this plays a large part in the maintenance of normal tissue tone. Now in a malocclusion this does not take place. The stresses of mastication are unequally divided, due to the fact that some teeth are out of occlusion completely, and others are inclined at angles not adapted to resist the force

of occlusion, while still others bear the full impact of the powerful contractions of the masseter, temporal and internal pterygoid muscles. It is recognized that normal function is a requisite in the development and health of body tissues. The teeth that are out of occlusion naturally function below par with the result that the blood and lymph supply is subnormal. It is a common observation, therefore, that infection and atrophy of the contiguous tissue are the natural sequelae of this condition. The tooth will be injured, whose long axis is not parallel to the lines of force, because the alveolar structure is not built to withstand lateral stresses. The alveo-



FIGURE—5.—A and B illustrates condition of case 3 on first examination. Lateral incisors congenitally absent. Age 20 years. C and D show result of treatment.

lar crest acting as a fulcrum will eventually become absorbed and the resistance of the surrounding tissue will be reduced. This is also true where a few teeth, being in supraocclusion, receive the full force produced by the muscles of mastication. So-called pyorrhea is almost certain to follow in the wake of a neglected malocclusion.

Where there is much rotation and crowding of the teeth, oral cleanliness becomes more difficult. This increases the probability of decay and the eventual consequences thereof, viz: death of pulp, and finally abscessed teeth.

Frequently, cases present with such an extreme overbite that the lower anterior teeth, when in occlusion, press into the soft tissues of the palate, often producing lacerations. This condition makes mastication extremely difficult and, if properly done, painful. Needless to say under these conditions it is seldom properly done, and faulty muscular development usually follows.

For emphasis, let us summarize:

First: Malocclusions generally become progressively worse and should not be ignored.

Second: The injudicious extraction of deciduous teeth to make room for the permanent successors is bad practice.

Third: Prolonged retention of deciduous teeth is equally as harmful as premature loss of same.

Fourth: Disturbed endocrine function probably is an etiological factor in malocclusion of the teeth in many cases.

And Fifth: The correction of malocclusion of the teeth is insurance against personal and physical handicaps.

DR. R. H. T. MANN, Texarkana: In behalf of the society I want to thank Dr. Koch very much for coming here and reading this paper and presenting these pictures. I feel sure of this fact, that there certainly should be a closer working relationship between the dentist and the surgeon and physician. The dentists, as a matter of fact, are part of us and that there should at all times be the most harmonious relationship between us.

PERIARTERIAL SYMPATHECTOMY

History, Anatomical and Physiological Basis
Report of Case

ALBERT F. DEGROAT, M. D., Fayetteville

No operation has passed through more ineisitudes than periarterial sympathectomy. The reasons are plain. Both the exponents and the critics of this procedure have injected so much conflicting theory into their discussions that the facts have been largely obscured. Owing to this confusion, a method that should be one of the arms of the general surgeon has remained largely in the category of surgical curiosities.

Periarterial sympathectomy is not a new operation. In the late 1890's, Jaboulay of Lyons, France, became convinced that certain lesions were due, not to infection, but to disfunction of the vegetative nervous system. He was no doubt inspired by the work of the physiologists of his time on the trophic effect of nerves, and he attempted to develop practical applications of these new ideas. The result was the founding of the surgery of the vegetative nervous system which Jaboulay undertook to develop along broad lines.

One of the most solid of his accomplishments was the invention of periarterial sympathectomy. Ranvier and others had shown that the nerve supply of the arteries consists, in part at least, of a plexus that accompanies the vessels to the periphery in their adventitia and sheath. To interrupt these nerves Jaboulay denuded the femoral artery and observed some of the striking vaso-motor phenomena that are currently reported today. By this method certain so-called trophic ulcers were made to heal with astonishing rapidity and at least one case of chronic arthritis was believed to have been greatly benefited.

This phase of Jaboulay's work was coldly received and periarterial sympathectomy soon fell into relative oblivion. During the war, however, Leriche, also of the Lyons school, revived and perfected the method and through his own clinical applications and researches placed it on its present basis. Leriche's claims for the operation immediately encountered theoretical objections. It was claimed that denudation of an artery could not

interrupt the vaso-motor nerves because these nerves reached the vessels by way of the spinal nerves and a counter proposition was immediately offered, namely, resection of the sympathetic ganglia. However, time proved that periarterial sympathectomy actually worked so some of the incredulous found it necessary to change the anatomical facts to suit the theory. Evidence has been offered that the vaso-motor nerves in toto actually do follow the arteries throughout their course thus making the Jaboulay-Leriche operation theoretically acceptable. Through all the discussions runs the assumption that periarterial sympathectomy acts uniquely by destruction of the vaso-constrictor nerves, leading to a more or less permanent hyperaemia of the extremity. Other considerations have been largely overlooked.

Unless all the physiologists of the last half century have been wrong, the nerves supplying the arteries of the extremities take two courses, the spinal nerves, principally the median and the sciatic, and the periarterial plexus. Thus by denuding an artery there can be no question of depriving it entirely of its nerve supply. But the operation does involve the destruction of both afferent and efferent nerves and its action must be quite complex, probably largely reflex.

The actual phenomena observed are the following:

When an artery, the femoral for example, is exposed, it contracts slightly. When the adventitia is picked up, incised and stripped from the vessel, this contraction becomes very marked and the pulsation largely disappears. Shortly after the operation a secondary dilatation occurs involving the artery and all its branches, which is manifested by a rise in the temperature of the extremity. This hyperemia and rise of temperature is transient. The duration has been variously given as three weeks and three months. These effects are the most obvious, but there are others less easily subjected to direct observation that will be returned to in a moment.

The logical application of such a phenomena is to the diseases characterized by vascular spasm, the out-standing one being Raynaud's disease.

Raynaud's disease appears to be a pure vaso-motor neurosis, characterized by attacks of ischemia, usually bilateral, of the extrem-

ities. As might be expected, periarterial sympathectomy provides immediate and complete relief. But the question arises as to the permanence of this relief. It has been mentioned that the vaso-dilatation is assumed to be the sole effect of the operation. Were this the case, the cure would end with the disappearance of the hyperemia. The theory is evidently wrong because many cases of typical Raynaud's disease have been permanently cured as far as is known from the present period of observation. Failures have been recorded. Certainly some are due to erroneous diagnosis; vascular spasm is not always due to Raynaud's disease. Furthermore, the site of the disturbance in Raynaud's disease is unknown. Possibly the location varies, sometimes involving a segment of the nerve supply not influenced by periarterial sympathectomy. The most striking cases with which I am familiar is one treated by the late and greatly regretted Dr. Smoot of Dallas. A woman had suffered since childhood with a typical Raynaud's disease that had caused gangrene of portions of all her fingers. Following periarterial sympathectomy this patient has remained absolutely well for six years. For information concerning her present condition I am obligated to Dr. George Carlisle of Dallas. Evidently the vaso-dilatation is only an epiphenominon. The real action in Raynaud's disease is an interruption of the reflex responsible for the arterial spasm.

The same immediate effects are obtained in the organic arterial diseases that are often complicated by attacks of acute ischemia, notably arteriosclerosis and thrombo-angiitis obliterans. Here, owing to the arterial obliteration, nothing permanent can be expected but there are circumstances in which periarterial sympathectomy is justified to relieve the intolerable pain that accompanies the attacks of arterial spasm. The operation has been advocated in the pregangrenous stage of thrombo-angiitis obliterans to put off the evil day when amputation becomes necessary.

The active hyperaemia produced by periarterial sympathectomy can be utilized in other conditions, notably, ulcers that fail to heal

under etiotropic treatment, and x-ray burns. Here the action of the operation is not altogether clear, but is none the less real. Leriche has exposed a rather unexpected phenomenon, a local and general leucocytosis that seems to be responsible for the rapid sterilization of the ulcers.

The following case I owe to the kind collaboration of Dr. Ellis of Fayetteville: The patient was a gentile, 25 years old, having a negative family and past, personal history. He had suffered two previous attacks of progressive ischemia of the lower extremities, affecting first one and then the other. In each attack he had lost a toe. In the third and present attack the foreign protein treatment of Brown was promptly administered without appreciable benefit. When seen by the author all of the toes of the right foot with the exception of the fifth were gangrenous. Intravenous injections of normal saline and 2 per cent sodium citrate solution failed to arrest the process and it extended onto the foot. Amputation was continually refused. Owing to the violent attacks of pain the patient slept and ate but little and his general condition became deplorable. Finally a periarterial sympathectomy was accepted. This measure was urged with the idea of relieving the pain and putting the patient in condition for amputation. The operation gave immediate relief. The leg became warmer than the opposite, the line of demarkation became clear-cut and separation of the gangrenous tissues progressed rapidly. The pulse in the popliteal space, that had been scarcely perceptible, became very definite. The patient's general condition improved remarkably. Two weeks after the sympathectomy, amputation was strongly advised, but was again refused. The improvement of the local condition was maintained for approximately a month. A rapid extension of the process then occurred and in two weeks the gangrene passed from the lower fourth of the foot to the middle. The pain returned and amputation was then demanded by the patient. This was performed in the lower fourth of the thigh. Sections of the vessels showed the changes of thrombo-angiitis obliterans.

THE JOURNAL

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

OBJECTIONABLE FEATURES OF INDUSTRIAL MEDICINE WHEN CONDUCTED UNDER UNDESIRABLE CONDITIONS*

Much industrial medicine is carried out under conditions far removed from the high standards outlined in this paper. Many persons caring for industrial medical problems possess far fewer qualifications than those earlier indicated. As a necessary by-product of this situation, there arise irritating, well defined medical difficulties. A number of these objectionable features likely to arise when industrial medicine is conducted through undesirable procedures are as follows:

1. Low quality of industrial medicine may tend to force the utilization of the services of the plant physician, when the choice of another physician is the patient's preference.

2. The plant physician may unduly represent the interests of the manufacturer, instead of retaining a rigid nonpartisan attitude.

3. Through personal friendship between the plant physician and certain specialists, many cases that would naturally belong to specialists located near the factory or the living area of groups of workers may be too greatly diverted.

4. Low qualifications of some industrial physicians may injure industrial medicine in its entirety, as a specialty.

5. Low salaries of some industrial physicians may aggregate smaller sums than accrue from compensation boards, and thus the physician may prostitute his services to the point of profit to the factory.

6. Insistence on the part of the workmen to utilize physicians of their own choice may jeopardize their jobs in a factory.

7. Physical examinations of applicants for work, if carried out with a view to eliminating all defectives in industry, may tend to debar from work many disabled persons and make them objects of charity.

8. Physical examinations may disclose imperfections that may directly, or indirectly, lead to extrusion from connections with the factory.

*Extract from article on "The present status of Industrial Medicine," by Carey P. McCord, M. D., Cincinnati—American Medical Association Bulletin, January, 1930.

9. Industrial physicians may be too zealous in the socialized aspects of medicine and seek out an undue quantity of charitable services.

10. The relations between the industrial physician and patient are not confidential, in that most States permit the disclosure of the results of medical examinations to the employer.

A SUGGESTED ATTITUDE FOR ORGANIZED MEDICINE TOWARD INDUSTRIAL MEDICINE

From the point of view of one industrial physician, who, in this paper, has attempted to put his finger on the strength and weakness of industrial medicine in its many angles, there seems to be some promise of betterment if organized medicine may accept, in its attitude, some or all of the following items, and contemplate the action projected in some of the items:

1. Organized medicine must accept its subdivision, industrial medicine, as a fixture within the general field of medical endeavor, and anticipate an extension rather than a recession of its application in industry.

2. Organized medicine must recognize that industrial medicine embraces, in a restricted fashion, the practices of both public health and curative medicine, and in so doing, deals with workers both as individuals and in groups.

3. Organized medicine should discriminate between the genuine and the spurious in industrial medicine, creating and applying appropriate terminology, standards, objectives, boundary lines and practices.

4. Organized medicine should demand higher standards of training and experience for industrial physicians, and reserve its recognition for those attaining to those standards.

5. Organized medicine should demand higher standards for practitioners in general, in order that the alert industrial physician, in his responsibility to obtain the medical care best suited to the worker's interests, may not have to depart from his concepts and desires in relation to the practitioner.

6. Organized medicine should recognize that industrial medicine is necessarily related to compensation matters, and that many compensation matters, and especially the medical aspects of compensation, are often conducted in a way that reflect discredit on the entire medical profession, and in particular the in-

dustrial physician is engulfed in unwanted situations not of his own creation and beyond his individual control.

7. Organized medicine should condemn the commercialized surveys conducted in industry under the guise of industrial hygiene, when it appears that any such work operates to the disadvantage of the industrial workers as a group. Many good investigations are commercial, but are profitable to the worker. For example, a large study is now under way in the benzol industry. Sales promotion is undoubtedly the prime objective. Such work in industrial plants as may be done in this study will, undoubtedly, lead to further safeguarding for the workman.

8. Organized medicine should discourage the widespread practice of estimable physicians of regularly refusing to accept any work, fees for which are derivable from some industrial compensation body. This, at once, tends to lower the level of good industrial medicine and to place its control in less desirable hands. Industrial cases are not charity cases and may not be relegated to that level.

9. Organized medicine should abandon its present attitude toward industrial medicine, characterized by querulousness, suspicion, fear that industrial medicine is alined with interests unfavorable to medicine in general. Industrial medicine is the legitimate offspring of general medicine and genuine industrial medical needs. This offspring is not fundamentally defective, and if wayward, parental neglect is one blamable factor.

10. Organized medicine should recognize that many physicians functioning in industry are unalined with any organization, State or national, engaged in industrial medicine betterment. Much thinly veiled condemnation in local academies of medicine has ostracized the majority of physicians working in industry, whether or not they are qualified industrial physicians.

11. Organized medicine should recognize that both nationally and by States its association sections, in which industrial medicine is embraced, are inadequately functioning so far as the promotion of desirable things for the control and betterment of industrial medicine are concerned. Organized medicine has great need for leadership for its child, "industrial medicine."

12. Organized medicine should recognize that if industrial medicine is, or is to be made, a creditable and substantial division of medicine, a new attitude should be fostered which will lead to the centralization of industrial medical endeavors within organized medicine, where it properly belongs, instead as now obtains in separate or borderline associations.

Personal and News Items

Dr. J. S. Carrens of Pitman has moved to Maynard, Arkansas.

Dr. James A. Foltz of Fort Smith and Dr. G. A. Warren of Black Rock were visitors in Little Rock last month.

The Drew County Medical Society elected Dr. M. Y. Pope, President and Dr. A. S. J. Collins, Secretary-Treasurer for 1930.

Dr. Merlin J. Kilbury announces the opening of a bacteriological, pathological and chemistry laboratory at 716 Donaghey Building, Little Rock.

Little Rock had a death rate of only 10.4 persons out of every 1,000 for the year 1929, it was announced recently in the annual report of Dr. C. R. Moon, city health officer.

Dr. Fred C. Zapffee, Secretary, Association of American Medical Colleges, recently inspected the School of Medicine and the hospitals of Little Rock.

At the meeting of The Federal Bank and Trust Company, Little Rock, in January, Dr. Robert Caldwell was elected president, succeeding Mr. George W. Donaghey, who becomes chairman of the board.

The Hot Spring County Medical Society met January 24 and elected the following officers for 1930: President, E. T. Bramlitt, Malvern; Vice-President, Chas. Prickett, Malvern; Secretary-Treasurer, W. G. Hodges, Malvern; Delegate, J. M. Williams, Malvern.

Grant County Medical Society reported the election of the following officers for 1930: President, O. W. Hope, Sheridan; Vice-President, R. L. Paxton, Sheridan; Secretary-Treasurer, C. F. Cole, Prattsville; Delegate, O. R. Kelly, Sheridan.

The Union County Medical Society elected the following officers for 1930:

President, J. A. Moore, El Dorado; Vice-President, E. J. Munn, El Dorado; Secretary-Treasurer, David LeVine, El Dorado. Delegates, M. V. Russell and H. H. Niehuss.

On and after February 1, 1930, the Victor X-Ray Corporation will be known as the General Electric X-Ray Corporation. The trade mark "Victor" heretofore used will be retained as the trade designation of the products manufactured by the General Electric X-Ray Corporation.

It has been reported that plans are being formulated by the Boone County Medical Society for the erection of a \$30,000.00 hospital for Harrison. The hospital committee, which is composed of Drs. W. H. Poynor, D. L. Owens and J. H. Fowler, is working out plans for the construction and maintenance of the hospital.

Dr. Arthur J. Cramp of Chicago, Director, Bureau of Investigation, American Medical Association, addressed a gathering of ladies at the Woman's Club, Little Rock, January 28. In the evening Dr. Cramp spoke before a joint meeting of the faculty, School of Medicine and the Pulaski County Medical Society. Dr. F. Vinsonhaler presided.

The Woman's Auxiliary of the Pulaski County Medical Society met January 15, with Mrs. Oscar Gray as hostess, assisted by Mesdames L. D. Reagan, C. C. Reed and Bryce Cummins. The president, Mrs. C. E. Oates, presided over the business session, following which Mrs. M. J. Kilbury, leader for the afternoon, gave a most interesting paper on "Communicable Diseases."

The next meeting will be held February 19 at the home of Mrs. Homer Scott.

The Union County Medical Society was host to the Tri-County Medical Society, comprising Union, Ouachita and Columbia counties, at a dinner meeting at the Randolph Hotel. Dr. J. S. Rinehart, President of the Tri-County Society, presided. The address of welcome was delivered by Dr. M. V. Russell, President of the Union County Medical Society.

The program included several talks by specialists of Shreveport, La., and Little Rock, and musical entertainment was presented by Mrs. J. D. Trimble, Miss Gladys Morgan and Fred Trull.

Dr. Guy Caldwell of Shreveport gave a demonstration of the mechanism of the reduction of fractures, with motion picture slides illustrating his talk. Dr. J. E. Knighten of Shreveport read a paper and a report of a case of melanoma.

Dr. Paul Mahoney of Little Rock read a paper on focal infections and discussed the relation of the infections to systematic disease. Dr. R. J. Calcote of Little Rock also made a short talk.

Correspondence

TENNESSEE STATE MEDICAL ASSOCIATION

Office of Secretary-Editor

Nashville, Tenn., January 28, 1930.

Dr. Thad Cothorn, President,
Arkansas State Medical Society,
Jonesboro, Arkansas.

Dear Doctor Cothorn:

On April 8, 9, 10, 1930, the Tennessee State Medical Association will celebrate, in Nashville, the one hundredth anniversary of its organization.

We are endeavoring to plan a program that will be in harmony with the spirit of such an occasion.

On behalf of the Tennessee State Medical Association I am writing to request that your Association send representatives to this meeting. This means also that any members of your Society will be welcome to attend. We know there are many doctors in your State who graduated from Nashville and other Tennessee institutions who might be glad to come back. To all of these a hearty welcome is extended.

You are requested to give publicity to this invitation to the end that all your members will know of it.

Cordially yours,

H. H. SHOULDERS,
Secretary-Editor.

Obituary

WADDELL, GRACEY — Dr. Gracey Waddell of Jonesboro died in New Madrid, Missouri, January 12, 1929. Aged 70. Dr. Waddell was born in Kentucky, moving to Missouri when a young man, where he taught school for several years before studying medicine. He graduated in medicine from Barnes Medical College in 1898. He moved to Jonesboro, Arkansas in 1902. During his residence in Jonesboro he was identified with organized medicine and stood for the best professional standards and progress.

He is survived by his widow of New Madrid, Missouri.

CORN, FORREST ALBERT—Dr. F. A. Corn of Lonoke died January 28, 1930. Aged 66. He had been confined to his home for the past year. He was born at Old Austin, Lonoke County, the son of Dr. and Mrs. B. W. Corn. He was graduated in medicine from Vanderbilt University in 1891, and began practicing medicine in Lonoke the same year.

Dr. Corn is survived by four children, Mrs. James Hogan, Miss Margaret Corn and Dr. F. A. Corn, Jr., all of Lonoke, and Mrs. George Good of England.

THROWER, WM. W.—Dr. W. W. Thrower of El Dorado died November 30, 1929. Aged 57. He died at his native home, Montgomery, Alabama, after several months illness. Dr. Thrower had practiced medicine in Alabama, Louisiana, and Arkansas.

Surviving are his widow, one brother, and two sisters.

In Memorium

The medical profession and the City of Morrilton sustained a serious loss at the close of the Sabbath when the Soul of Dr. A. R. Bradley took its flight, January 4, 1930.

While fully aware of the great loss sustained in his going, we know that he looked death in the face unafraid, not with the spirit of a stoic, but with the fortitude of a Christian gentleman.

Dr. Bradley was constantly a student of human nature and possessed that rare quality of friendly cheer and good will for everyone. This love and fellowship he carried in his profession and always wanted to serve rather than to be served.

He will be remembered by those who knew him for his keen enthusiasm, his loyal friendship, and for his sympathy and helpfulness.

Whereas, be it resolved that we the members of the staff and the Sisters of St. Anthony's Hospital realize this loss and mourn the going away of one of our members.

Be it further resolved that we express our deepest sympathy to the members of his bereaved family, in this their hour of deep sorrow.

E. L. Matthews,
B. C. Logan.

OFFICIAL HEALTH PROGRAM
of the
WOMAN'S AUXILIARY
of the
AMERICAN MEDICAL ASSOCIATION

I. PUBLIC HYGIENE:

Fundamentals upon which Auxiliary work for improvement of public hygiene should be based:

(1) *Recognition of the fact that* public health work is a highly technical job, requiring scientific, technically trained workers. That health work undertaken by lay women with no knowledge of the public health problem as a whole is necessarily fragmentary and ineffective.

(2) *Recognition of the fact that* every State, county and city is entitled to a scientific full-time health department (organized not to treat the sick, but to prevent disease and promote health), adequately financed, free from political domination, and providing

continuity of service to a trained personnel so long as work is efficient.

(3) *Recognition of the fact that* the first and most fundamental job for lay organizations like the Auxiliary is to secure such scientific full-time health departments and adequate health protection, in their State, their county, their city or town.

(4) *Recognition of the fact that* where efficient, full-time, scientific health departments do not exist (and only about ten per cent of the rural districts of the United States have anything approaching adequate health protection), health activities must be initiated and carried on by volunteer unofficial agencies; but that all such work should be so planned and administered as to serve as stepping-stones toward the full-time official health department, and that when the full-time official health department, with workers trained for public health work, has become an accomplished fact, lay organizations should support and co-operate with the official workers and should be willing to take orders from them.

(5) *Recognition of the fact that* no health department, State, county or city, can do effective work without intelligent co-operation of the public; that such public co-operation depends upon wide-spread health education; that lay organizations can do this educational work, and are needed for it; and that the Auxiliary can be one of the most valuable tools for an official health department to use in this work, because it can by its education of the public concerning the official health department's work and needs, be the means of gradually eliminating or preventing political interference with an efficiently working department, and thus insure to it uninterrupted public service.

Most volunteer agencies do not yet realize the wastefulness of their individualistic efforts. One of the first things the Auxiliary should do is to work for a change of attitude in other volunteer women's organizations.

Health officials know that it is not always the work which makes the greatest emotional appeal to the public which most needs to be done. Unfortunately most women do *not* know this. This is something the doctors' wives might well undertake to teach other women.

The National Auxiliary recommends, therefore, that each State Auxiliary undertake, under the direction and with the help of the Pub-

lie Health Committee of the State Medical Association and of its Advisory Council a study *first of all* of the fundamental principles of health promotion and disease prevention; second, of the set-up considered essential by public health experts for an effective State health department, of qualifications of personal, adequate budget, and the like; and third, of the State health conditions; that it devise means of acquainting all the State board members with the result, and that recommendations for educational work by the county Auxiliaries be based upon the conditions found.

In States where all is well and where time has developed good official health machinery and good health conditions, general knowledge of the fact will tend to prevent interruption of the excellent work, and will be a source of satisfaction to the women of the State.

In those States where there is much yet to be done, this investigation will indicate what sort of work needs doing first. For example:

(a) In those States which are not in the Birth Registration Area, the Auxiliaries would, without doubt, wish to tackle, as their first job, the ninety per cent birth registration problem.

(b) In those States in which the State Health Department believes the "County Health Unit" to be the solution of the rural health problem, the county auxiliaries should be encouraged to take as their chief work such persistent and wide spread education of the public as will gradually create a general demand for the full-time county health department.

(c) In those States where the rural health work is directly done "long distance" by the State Health Department, the county auxiliaries, if willing to work, and work under the directions of the State Health Department, can carry on intensive local health education work which would be impossible for the State department without intelligent local co-operation.

To those auxiliaries which agree with these ideas the committee recommends the following outline of study:

(1) Vital Statistics. Their value.

Compare the vital statistics of the State with those of other States.

Compare the vital statistics of the different counties of the State.

Compare the vital statistics of the cities with other cities in the State, and in the United States.

(2) The State Health Department; its organization; and program:

(a) For general State work.

(b) For co-operating with the counties in improving county health conditions.

(3) The value of the Public Health Nurse.

(4) The County Health Unit as a possible solution of the rural health problem.

Community-Wide Conditions Which Affect Health

(5) Milk:

Milk standards, why necessary, what milk standards your community needs. How are these needs being met?

(6) Housing:

Your community housing laws.

Housing conditions as they have developed under these laws and as they affect health.

Improvements needed.

(7) General Sanitation and its relation to the death and morbidity rates.

Sewage disposal.

Water.

Garbage.

Flies.

Dust and street cleaning, etc.

II. PERSONAL HYGIENE:

The improvement of personal hygiene in any community is almost entirely a matter of education. Here again the Auxiliary members must first educate themselves before they can take a safe part in educating the public. The committee therefore recommends that the Auxiliary study programs shall include such subjects as:

Health Promotion:

Prenatal care.

Child Welfare—infant and pre-school hygiene.

School hygiene.

Mental hygiene.

Social hygiene.

The advantage to the public of general compliance with health regulations.

The periodic health examination.

Control of communicable diseases.

The entire program should close with a survey of all the private agencies doing health work in the community, and a discussion of the possibility and desirability of centering the direction of all such work in a full-time, scientific health department, under which the private agencies, while still maintaining their identity, would work in complete co-operation.

County Societies

SEVIER COUNTY

(Reported by C. E. KITCHENS, Sec.)

The regular monthly meeting of the Sevier County Medical Society was held in DeQueen, November 12, 1929.

Present: Norwood and Graves of Looksburg; Hendriks of Gillham; Archer and Kitchens of DeQueen.

As this was a business meeting and the date for the annual election of officers, no scientific program was given. Officers elected were: President, C. A. Archer; Vice-President, B. E. Hendriks; Secretary-Treasurer, C. E. Kitchens.

DeQueen was selected for the permanent meeting place for the next year.

HOT SPRINGS-GARLAND COUNTY

(Reported by G. A. HEBERT, Sec.)

The Garland County Medical Society held its first regular meeting of the year on January 13th in its new quarters in the Kingsway Hotel. There was an unusually large attendance. The only out of town guest was Dr. C. E. Dungan of Augusta, Arkansas.

A committee consisting of Drs. O. H. King, W. H. Deaderick, and O. J. MacLaughlin reported that progress is being made toward the weekly radio health talks which will be given over our radio station KTHS. In addition to papers written by local physicians, whose names are not mentioned in the talks, there will also probably be health talks obtained from the American Medical Association.

The program of the evening was rendered by Officers of the Army and Navy General Hospital of Hot Springs as follows:

No. 1: Multiple Myeloma with a report of three cases by Major H. J. Hallett. This consisted of a detailed history, complete x-rays and laboratory work with autopsy findings, and showed the results of an exhaustive study of this condition.

No. 2: Hay-fever and Asthma Allergy by Major W. B. Meister. This paper was the first of a series dealing with this very interesting condition. In the first paper the essayist outlined the present accepted theory of the causation of the allergic diseases and has promised at our regular meeting, the second Tuesday in February, to go into the matter of diagnosis and treatment.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society held its regular monthly meeting January 2, at the Orlanda Hotel in Camden, with Dr. N. S. Word as host to the Society. A banquet was served in the private dining room of the hotel.

Physicians in attendance were: Rinehart, Early, Powell, Jameson, Word and Robins of Camden; Purifoy and Rushing of Chidester; Partee and Thompson of Stephens; Clements of Mount Holly; Newsom of Louann, and Hathcock of Locust Bayou.

The program consisted of talks on "Stomach Trouble" given by Drs. Scarborough and Zell of Little Rock.

BOONE COUNTY

(Reported by W. H. POYNOR, Sec.)

The Boone County Medical Society met at the Court House in Harrison, January 14, 1930, at which time the following officers were elected for 1930: President, D. E. Evans, Harrison; Vice-President, J. H. Fowler, Harrison; Secretary-Treasurer, W. H. Poynor, Harrison; J. G. Gladden of Western Grove was elected delegate to the State meeting at Fort Smith with Poynor, Owens, Blackwood and J. H. Fowler as alternates. Councilors elected were: Poynor, three year term; Gladden, two year term; Owens, one year term.

A much needed hospital for Harrison came in for discussion, and a committee was appointed consisting of Owens, J. H. Fowler and Poynor to formulate plans looking to the establishing of a modern hospital. It is hoped that sufficient interest and co-operation may be found among both local physicians and residents which will shortly materialize, bringing to Harrison a modern hospital.

CONWAY COUNTY

(Reported by A. L. GOATCHER, Sec.)

The Conway County Medical Society met in the office of the County Health Unit, Morrilton, Nov. 28, 1929 and elected the following officers for 1930: President, W. J. Bruce, Morrilton; Vice-President, H. E. Mobley, Morrilton; Secretary-Treasurer, A. L. Goatcher, Plumerville; J. M. Matthews, Morrilton, was elected delegate to the State Medical Society and J. H. Colay of Cleveland, alternate.

At the meeting, January 16, 1930, the following were present: W. H. Bruce, J. H. Jackson, E. L. Matthews, H. E. Mobley, B. C. Logan, W. E. Matherly, and A. L. Goatcher.

Dr. H. E. Mobley read an interesting paper on "Uterine Cancer." Dr. E. L. Matthews opening the discussion.

Dr. B. C. Logan reported two cases of "Ulceration of Cervix Uteri."

Dr. W. E. Matherly, who has just located in Morrilton, was elected to membership in the Society.

BRADLEY COUNTY

(Reported by W. T. FIKE, Sec.)

The Bradley County Medical Society met in Warren, December 17, 1929. Dr. C. N. Martin, president, presiding.

Present: C. N. Martin, Rufus Martin, W. L. Hartsell, C. E. Gannaway, M. T. Crow, G. L. Wilson, and W. T. Fike.

Officers elected for the ensuing year were: President, C. N. Martin, Warren; Secretary, W. T. Fike, Warren; Delegate to the State meeting, M. T. Crow, Warren.

The meeting was a most interesting one, and everyone expressed a desire for better work and a more faithful attendance.

D. Fisher, M. D., Professor Emeritus of Neurology University and Bellevue Hospital Medical College, New York. With 228 illustrations, some in colors. Published by F. A. Davis Company, Philadelphia. Price, \$6.00.

The principal theme of this treatise is the semiology of the disorders found at the bedside. Thus, the description of disease begins with symptoms and after the symptoms are fully described, etiology and pathology, diagnosis, prognosis and treatment are taken up in the order named.

In part one is given "Method of Neurological Examinations." Part two, gives "Spastic Paralysis." Part three, "Flaccid Paralysis." Part four, "Ataxias, Tremors and Spasms." Part five, "Trophic Disorders." Part six, "Vasomotor Disorders." Part seven, "Functional Neuroses."

The Medical Museum—Based on the New System of Visual Teaching by S. H. Daukes, Director, The Welcome Museum of Medical Science, Six 10" x7," pages 172. (The Welcome Foundation Ltd. Endsleigh Court, 33, Gordon Street, London, W. C. 1. England).

This book is not merely a theoretical contribution to the improvement of museums in general and medical museums in particular, but a description of practical achievement based upon theory and vision.

The author is precise, clear and has obviously devoted much study, skill and care to a subject on which this book stamps him as an expert. Having in the first chapter discussed the function of a medical museum and made a plea for reform and a wider outlook, Dr. Daukes proceeds in subsequent chapters to describe and discuss the details of the new system of visual teaching on which the ideal medical museum is based.

This is followed by appendices dealing with the application and development of the system, with types of buildings, walls, screens, cases, labels, illustrations and technical details of preserving and mounting specimens. In conclusion there is a very valuable and complete bibliography of technical museum publications and 45 whole-page illustrations of screens, sections and specimens which are most helpful as providing practical evidence of the soundness and practicability of this new system of visual teaching.

Book Reviews

Textbook of Clinical Neurology.—For Students and Practitioners. By M. Nuestaedter, M. D., Ph. D., Visiting Neurologist, Central Neurological Hospital, Welfare Island; Formerly Lecturer in Neurology, University and Bellevue Hospital Medical College. With an introduction by Edward

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in these officers.

DIRECTORY

OF THE

COUNTY SOCIETIES OF THE ARKANSAS

MEDICAL SOCIETY

1930

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YELL	H. L. Montgomery	Gravelly	C. B. Linzy	Plainview

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Original Articles

PRACTICAL BLOOD CHEMISTRY*

M. J. KILBURY, M. D., Little Rock

The subject of blood chemistry is a comprehensive one. It will therefore be impossible to cover it thoroughly in the allotted space. It is my intention to consider only a few of the most valuable tests.

This field of work has been recently introduced in medicine. It was during the years 1913 to 1917 that Folin Benedict, Lewis, Bang, Myers and others developed methods of examination that could be used in clinical laboratories.

At the present time, blood chemistry is being extensively used only by physicians in the larger centers where well organized laboratories are located. It is possible to transport blood specimens for chemical examination long distances. Physicians at some distance from chemical laboratories are beginning to avail themselves of these tests.

The fact that blood chemistry is rather new and has been used by comparatively few physicians, prompted me to select this subject for consideration. I have nothing original to present. I simply offer this paper in the nature of a review.

The most important test in this field of work is that for blood sugar. It is practically impossible to scientifically handle a case of diabetes without the aid of this test. It is possible to diagnose the case and to treat it until the urine becomes sugar free, but the blood sugar may still be too high. It is only by means of the blood sugar test that one may ascertain the true condition of the patient and properly adjust the insulin dosage and diet. I am not unmindful of the fact that physicians

in isolated districts must sometimes do without this test and that many times they do good work. I believe, however, that severe and moderately severe cases of diabetes should be sent to some hospital for a complete examination of blood and urine and an adjustment of their diet. This can only be done in hospitals having well organized laboratories and dietary departments. These patients, after being instructed regarding weighing and preparing their food, stand a much better chance of permanent relief.

The non-protein nitrogen test is probably next in importance. This test is of value in nephritis, obstruction along the urinary tract, due to disease of the prostate or calculi. The non-protein nitrogen is also increased in obstruction high in the intestinal tract. It is a most valuable test of renal function.

The creatinin of the blood is a most valuable test, from the standpoint of prognosis, in cases of kidney impairment. Creatinin is the protein end product most easily excreted. Its retention in the blood is therefore indicative of severe kidney disease. Cases having a creatinin findings of 5 mgms. per 100 cc. of blood are usually fatal. One may make exceptions in cases in which the cause of trouble may be removed immediately. It has been found that when the kidneys are so impaired that the creatinin rises above 5 they are incapable of repair. Death is then usually a matter of days or months.

Uric acid nitrogen is increased in early parenchymatous nephritis. It is one of the first non-protein nitrogen constituents to be increased. It is also increased in gout. This test is sometimes of value in differentiating gout from arthritis.

The carbon-dioxide combining power of the blood plasma is the best test for determining the presence and severity of acidosis and likewise of alkalosis.

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

The blood chloride test is valuable in cases of pyloric obstruction. It will be decreased when vomiting has existed for a long time. When an extremely low chloride has been found intravenous use of a hypertonic saline (2%) solution is indicated. This procedure is often followed by marked clinical improvement.

A high blood chloride is often found in nephritis.

The van den Bergh's test for serum bilirubin is valuable in differentiating obstructive jaundice from hemolytic jaundice. The direct reaction indicates obstructive jaundice; the indirect, hemolytic jaundice.

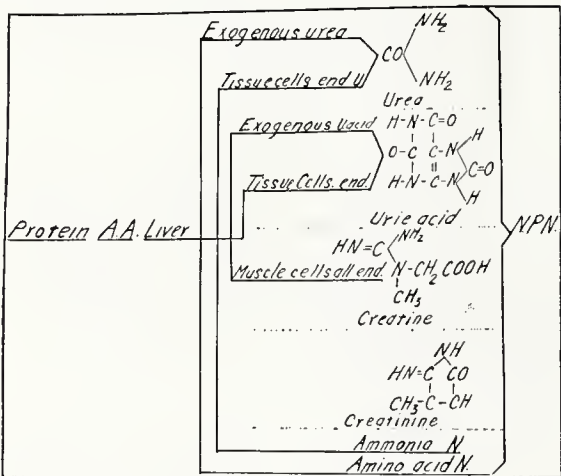
In order to properly evaluate pathological blood findings it will first be necessary to review the normal metabolism of proteins, carbohydrates and fats.

Table No. 2, shows the normal metabolism of the carbohydrates and fats, also the condition which is found in acidosis due to diabetes.

	NPN	Urea N	Uric Acid	Non-protein N	Blood Sugar	Chlorides	CO ₂
Normal blood	25-35	12-15	2-3	1-2	90-120	50-55	55-70
Early interstitial Nephritis	30-50	12-30	3-10	2-4			
Terminal interstitial Nephritis	350	300	35	35		630	25-40
Renchymatous Nephritis	50-100	30-60		3-5			
Eclampsia	35-55	5-16	3-10	1-2.5		620	30-50
Mild Diabetes mellitus					200-300		50-60
Severe Diabetes					500-1000		20-40

Table No. 3, shows the normal blood findings and also those found in diseases in which the chemistry is most frequently altered.

Blood Chemistry findings at different ages				
	NPN	Creat	Bi Sug	Chlorides
Ages 10 to 13	29	1.32	94.6	504
Ages 20 to 40	34.4	1.41	99	454
Ages 60 to 80	40.3	2.3	86	481



In table No. 1, I have attempted to show by diagram the normal metabolism of proteins. This table shows the constituents of the non-protein nitrogen of the blood. In health, the urea nitrogen makes up about 50 per cent of the total N. P. N. This is not so in kidney impairment. The urea N. May make up 75 or even 90 per cent of the non-protein nitrogen.

Table No. 4, shows three series of blood chemistry findings in youth, middle age, and old age. It will be noted that the non-protein nitrogen and creatinin has a tendency to increase with age. Blood sugar decreases in old age.

Blood findings before and 1½ hrs after breakfast						
Non Protein Nitrogen				Blood Sugar		
No	Before	After	Difference	Before	After	Difference
1	33	35	2	88	93	5
2	35	44	9	83	111	28
3	34	37	3	111	119	8
4	38	43	5	98	111	13
Ave	35	39.5	4.75	95	108.5	13.5

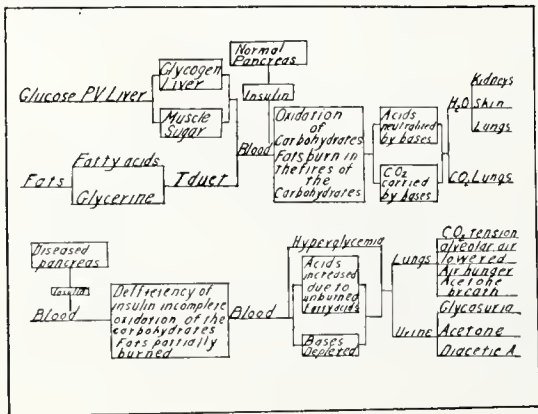


Table No. 5, shows a small series of blood findings on blood taken before and after a generous breakfast. It will be noted that there is a marked change in the blood sugar findings, but the non-protein nitrogen does not show a marked change. When it is possible, blood specimens for blood chemistry should be taken before breakfast.

Table Showing relation of Nonprotein Nitrogen to Creatinine

Number of Examinations	Non-protein Nitrogen	Average Creatinine
27	Below 30	1.39
87	30 - 40	1.38
73	40 - 56	1.56
31	56 - 75	2.35
17	75 - 100	3.2
16	100 - 150	4.7
10	150 - 200	5.5
4	200 - 300	5.8
Total 256		

Table No. 6, shows the relation of non-protein nitrogen to creatinin at different levels. It will be noted that the creatinin does not rise above normal limits with the non-protein nitrogen below 50 mgms. per 100 cc. of blood.

NO	DIAGNOSIS	NPN	CREAT	ALB	CASTS	PUS	TREATMENT	OUTCOME
9	HYPERTROPHY OF PROSTATE, RETENTION OF URINE	125	2.9	XXX	NONE	ZZZZ	DEATHHOUSE SALINE INTRAVENOUSLT	30 DAYS DISCHARGED
10	CHOLECYSTITIS, CHRONIC INTERSTITIAL NEPHRITIS, ENDOCARDITIS	84	3.1	NONE	ZZZZ	ZZ	LIQUID DIET	3 DAYS DIED
11	ADENOCARCINOMA OF COLON, APPENDICITIS ACUTE, LUES, NEPHRITIS ACUTE	125	3.6	Y	ZZZ	NONE	NONE	24 HOURS DIED
12	APPENDICITIS ACUTE, ACUTE NEPHRITIS, POST-OPERATIVE	125	2.1	XX	ZZZZ	NONE	DEATHHOUSE SALINE, HOT PACKS	
13	MULTIPLE ABSCESES OF LIVER, EMPYEMA & ADENOCARCINOMA OF GALL BLADDER, CHRONIC INTERSTITIAL NEPHRITIS, ENDOCARDITIS	84	3.1	NONE	ZZZZ	Z	DIGITALIS, ANTHRAKIN, LIQUID DIET	4 DAYS DIED
14	ACUTE PARENCHYMATOUS NEPHRITIS, COMA	111	2.7	XXX	ZZ	Z	NONE	1 DAY DIED
15	STRANGULATED INGUINAL HERNIA, UREMIA	63	2.5	X	NONE	NONE	OPERATION FLUIDS, DIURETIC	4 DAYS DIED
16	NONE	94	3.3	Y	NONE	Z	NONE	DISCHARGED IMPROVED
17	PERITONITIS SUBACUTE, STAPHYLOCOCCUS	56	3.3	NONE	NONE	ZZ	QUARTZ LIGHT, FLUIDS	DISCHARGED IMPROVED.

NO	DIAGNOSIS	NPN	CREAT	ALB	CASTS	PUS	TREATMENT	OUTCOME
1	ABORTION, PELVIC CELLULITIS, UREMIA	200	4	NONE	ZZZ	NONE	DEATHHOUSE SALINE INTRAVENOUSLT	30 DAYS DISCHARGED
2	ACUTE NEPHRITIS, ANURIA COMPLETE	111	4.4	XXXX	NONE	Z	INTRAVENOUS, HOT PACKS	4 DAYS DIED
3	PIELO NEPHRITIS	166	4	XX	Z	ZZZZ	FLUIDS, INTRAVENOUS DEATHHOUSE SALINE	DISCHARGED IMPROVED
4	HEART DIS. MITRAL REGURGITATION, NEPHRITIS ACUTE, EDEMA OF LUNGS.	143	4	XXXX	Z	NONE	SEDATIVES	10 DAYS DIED
5	APPENDICITIS ACUTE, CHOLECYSTITIS SUBACUTE, NEPHRITIS ACUTE.	144	4.3	XX	ZZ	ZZ	DIAPHRAGM, HOT PACKS SURG. PITUITRIN, GLUCOSE INTRAVENOUS	6 DAYS DIED
6	HYP. PROSTATE, URINARY RETENTION, CYSTITIS.	67	4.4	X	NONE	ZZZZ	SUPRA PUBIC DRAIN INTRAVENOUS FLUIDS	30 DAYS DISCHARGED
7	CHRONIC INTERSTITIAL NEPHRITIS, VINCENTS ANGINA.	67	4.4	XXX	Z	Z	REST IN BED LIQUID DIET MOUTH WASH	18 DAYS DISCHARGED
8	APPENDICITIS ACUTE, PARENCHYMATOUS NEPHRITIS, BARTHOLIN ABSCESS	111	4.4	Y	ZZ	ZZZ	HOT PACKS FLUIDS	DIED

Table No. 7 and 8, show the blood chemistry findings in a series of cases treated at St. Vincent's Infirmary. In this series of cases the creatinin findings were all below 5 mgms. per 100 cc. of blood. In No. 7 creatinin findings are below 4 mgms.; in No. 8 they are between 4 and 5 mgms. per 100 cc. of blood.

Series of 12 cases with creatinine above 5									
No	Diagnosis	Age	NPN	Creat	Alb	Cast	Pus	Treatment and outcome	
1	Neph. chr. Mitral ins.	42	143	10	XXXX	NONE	ZZZZ	Intravenous glucose in N saline. Hot packs Ten days Died	
2	Hyper. of Prostate	75	166	5				H.S. 24 hrs Died	
3	Neph. chr. int.	40	250	10	XXXX	ZZ	ZZZZ	Intravenous fl. H.S. 8 days Died	
4	Neph. ac. Malaria	40	130	6.6	XXXX	Z	ZZ	Int. v. fl. Hot packs 2 days Died	
5	Strept. inf. thr. Neph. ac.	27	250	5	XXXX	ZZZ	ZZZ	Int. v. fl. Hot packs 3 days Died	
6	Neocolitis	50	63	5				Int. v. fl. 7 days Died	
7	Neph. ac.	32	166	5	XX	ZZ	Z	24 hrs Died	

Series 12 cases creat above 5									
No	Diagnosis	Age	NPN	Creat	Alb	Cast	Pus	Treatment and outcome	
8	App. chr. Neph. acute	30	111	5	XXXX	NONE	Z	5 days died	
9	Pyclo Neph. Ectopic Kid	52	84	3.6	XXXX	ZZZ	ZZ	Cystoscopy Intravenous fl. 12 days Died	
10	Ureteral c. bilateral	23	129	9	XXXX	NONE	ZZZZ	Inc. drainage reperi. Nephrostomy later	
11	Neph. chr.	48	60	6.5	XXXX		AAA	Disch. unimproved	
12	Pregnancy Alb. Neph. acute.	35	30	100	5	XXXX	ZZZZ	Intravenous fl. Hot packs Diuretic Hyper. diet sol. 6 days died	
			75	6.6					
			111	8.8					
			143	8					
			134	7.2					
			166	9.					

Tables No. 9 and 10, show another series of cases in which the creatinin findings were 5 mgms. or above. In these cases the patients all died within 10 days, with the exception of one. This was a case of bilateral ureteral calculi in which immediate drainage was established. This case entered in the urological service and treated by Dr. H. F. H. Jones and Dr. W. E. Gray, is the only one in the experience of the writer to survive with a creatinin of 5 mgms. or more.

Case of severe diabetes Treated at St. Vincent's Inf.																			
Date	Age	Weight	Glucose	Acetone	Blood	Alb	Bilirubin	Urea	Creat	Calc	Phos	Chlor	Sulf	CO ₂	Temp	Pulse	Respir	CO ₂	Remarks
9/8	1030	54	XXX	XXXX	XXXX	XX	820							150	5	34	24	34	RAIN
	1650		XXX	XXXX	XXXX	XX													42 11 AM
			XXX	XXXX	XXXX	XX													30 3 PM
			XXX	XXXX	XXXX	XX	325												45 9 PM
	9/10		X	X	XX	XX	62		456	118	2	94.8		50	3	45	24	48	4:30 PM
	10/10		XXX	XX	XX	X			469	118	9.4	75.1		55	5				6:30 AM
	11/10		XXX	XX	XX		712												3:17 PM
	12/10	960	55	XXXX	XXX		124		788	48.4	51.4	41.9		75	2	46			
	13/10	2250	99	XXX	XX				770	59.6	50.3	59.1		40	2				
	14/10	1850	55	XXX	XX		319		783	41.4	50.9	59.1		60	3	48			
	15/10	1000	XX	X	X				1075	46.6	75.7	51.4		50	3				
	16/10	500	XX	X	X		317		1072	46.1	76.4	50.3		50	3	52			
	17/10	1000	X	X	X		463		1062	46.3	75.3	50.2		40	2				
	18/10	500	XXX				20		1306	49.8	100.4	51.2		20	2				
	19/10	1400	23				135		1306	49.8	100.4	51.2		50	3	53			
	20/10	1500	15						1312	51.6	100.8	49.7		25	2				
	21/10	1600	5.5	A			257		1311	52.8	100	50.1		2	53				
	22/10	1450	4.3	A					1624	50	129.1	60		25					
	23/10	1050	1.3	NONE					1796	50.7	156.2	60.5		30	2				
	24/10	1400	8				481		1800	50.3	150.8	60.4		20	2				
	25/10	2100	13						1799	50	150.1	60.4		20	2				
	26/10	600	12				216	502	1773	50.9	151	60.1		22	2	68			
	27/10	500	10						1736	50.8	150	59.9		20	2				
	28/10	600					180		1793	50.9	149.1	60.7		20	2				

Table No. 11, shows the complete laboratory findings of a severe case of diabetes. This case entered St. Vincent's Infirmary in deep

coma, having a blood sugar of 800 mgs. per 100 cc. of blood and e02 combining power of 30. This table also gives the insulin and dietary treatment. This case, treated by Dr. S. C. Fulmer and Dr. R. M. Blakely, was discharged with a blood sugar and a combining power of blood within normal limits.

In conclusion, it may be said that great advance has been made in this field of work in the past decade. Research now being carried on in the large medical centers will be productive of new and simpler methods of investigation. Much may be expected in the future.

DISCUSSION

DR. S. F. HOGE, Little Rock: I only want to discuss this paper about a moment, and to emphasize the growing importance of blood chemistry and to congratulate Dr. Kilbury, and thank him for the painstaking efforts that he has put in corraling this data. I am not entirely unfamiliar with the amount of work represented.

I want to say a little about diabetes in regard to the blood chemistry, because probably most of us are more familiar with diabetes than any other of the metabolic changes. That is, when cases come to us, the study is not complete without a complete urinary study and then a complete blood chemistry. Now, that means not only non protein nitrogen; creatinin, urea, but it also means blood sugar. This is of particular importance in many instances. There are many cases that will come into the hospital or into the office carrying some sugar in the urine. There is at least thirteen per cent that may show sugar in the urine with a perfectly normal blood chemistry, that really is not a diabetic state. There is probably another factor of eighteen per cent that will show no sugar in the urine and yet show a higher blood sugar than is normal, these cases are really potential or true diabetics. It is not so uncommon to find patients admitted in coma, with a blood chemistry of four, five, six or seven hundred, and no sugar in the urine. Those are dangerous cases. Again we may find a patient coming into the hospital with blood sugar of 250 or 300 and something like five or six per cent of sugar in the urine. That case isn't at all as serious a case as the one

that is not putting out any sugar by way of the kidneys.

There is another little dodge that is coming up on this which probably you are not so familiar with. Many of the insurance companies are now putting out rather specific information and certain specific tests for the insulin that has been used in glossing over a potential diabetic until he is examined by the insurance company. That has become generously used in many instances and the insurance companies are aware of it; seventeen such cases are using insulin in a manner in which we should not. It again emphasizes the physiological chemistry that is being standardized and used in the various clinical entities.

DR. I. J. JONES, Little Rock: I wish only to bear testimony to the industry and strict attention to details that I know Dr. Kilbury constantly displays in his work and also to the growing importance of blood chemistry, especially with relation to blood sugar. I am not so certain about the utility of blood chemistry in determining the question of kidney efficiency. I believe that in most cases the efficiency of the kidney can be better determined by the kidney function test than it can be by blood chemistry. It can certainly be more quickly done, and will probably be more generously availed of than the difficult processes of blood chemistry which require such well organized laboratory. Such kidney function tests as the Rosenthal and the older phenolphthalein test, I believe, should be more generally used in the case of nephritis.

However, there is one point that I didn't observe that Dr. Kilbury brought out, and that is the combination of the two findings in the combination of the two conditions; that is to say, kidney inefficiency with diabetes. I can illustrate that by recalling a case. The urine was sent down to the laboratory for the ordinary routine examination for sugar. No urinary sugar was found. The clinician insisted that his patient must have diabetes, based, however, upon his observation. We did then a blood chemistry and we found the astounding amount of 720 milligrams of blood sugar, and not a trace of sugar was being excreted by the kidneys. Doing then the kidney test, the phenolphthalein test, we found the kidney excretion was almost nil. In other words, this was a case of advanced interstitial nephritis, chronic interstitial nephritis, with a highly impaired function of excretion, and all the sugar which resulted from his diabetes was being retained in the blood, and by the administration of insulin we were able to reduce that blood sugar below 420 after several days.

THE PREVALENCE AND PREVENTION
OF DEAFNESS*

R. B. MOORE, M. D., Little Rock

I. Deafness in the Field of Preventive Medicine:

In the field of preventive medicine, the conservation of hearing is entitled to more attention than it has as yet received. Second only to the sense of sight, the most important of all the special senses, is that of hearing. Consciousness receives ideas and impressions, and language is learned through hearing. Education and mental progress are either advanced or retarded by its acuity. Since preventive measures in deafness are more effective than curative measures, it is our duty to employ means, as far as possible, toward the former. As yet, too little attention has been paid to the causative factors of chronic otological conditions which result in deafness.

Excepting congenital deafness and the occasional fulminating forms of acute infectious diseases, practically all deafness of childhood is preventable; and, as a sequence, most of the deafness of adults. If discovered early, eighty per cent of impaired hearing can be prevented or arrested. The early detection and removal of the causes of ear diseases that lead to a loss of hearing are the most important factors in the conservation of hearing. It has been estimated that forty per cent of the adult population has impaired hearing. When we consider that the impairment in more than half the total number of cases begins in childhood, and that ninety per cent of all disorders of the ear are secondary processes largely preventable, the importance of prophylaxis cannot be over estimated.

The forces of the entire medical profession should be directed to the preservation of the sense of hearing. It is a matter of no less importance than other problems of preventive medicine. Responsibility rests most heavily upon those of us who are frequently called upon to treat the various discomforts and diseases of childhood. Statistics from the Willard Parker Hospital show that ten per cent of all cases of measles and scarlet fever and five per cent of all cases of diphtheria occurring in that institution have some middle ear involvement. Nearly all deafness is due

to infection. Susceptibility to the otological conditions leading to deafness depends on the individual's local and general resistance.

II. Incidence of Deafness:

Deafness is usually insidious in its onset and so progressive in its development that the victim is often unaware of the condition until it is well established. Most deafness has its beginning in childhood and manifests itself in adult life. Inability to hear results in inattention; and inattentive children are often considered sub-normal. In over half of five hundred Norwegian school children found to have defective hearing, the teachers had never noticed that the hearing was impaired. Deficient hearing was found in 14.4 per cent of 4,112 pupils examined in the New York City public schools.

Economically, the loss to individuals and to the nation from deafness is incalculable. There are nineteen thousand children in schools for the deaf in the United States. The total deaf mutes number one hundred and fifty thousand. The estimated number of school children in the United States with impaired hearing, based on recent surveys made in the schools of New York City, is three million. Bock reports that in the city of Rochester, New York, fifty-seven children repeated sixty-six classes; four hundred and forty-one repeats cost the city twenty-six thousand four hundred and sixty dollars. These repeaters are an important economic problem to the taxpayer, the teacher, and the child.

III. Types and Causes of Deafness:

Strictly speaking, the term, deafness, means the total inability to hear, but it is also applied to the partial inability to distinguish sound. When congenital or acquired in infancy, total deafness is invariably associated with mutism. About forty per cent of total deafness associated with mutism is of congenital origin. Scarlet fever, meningitis and measles constitute the principal causes of the remaining cases. This group of the total deaf needs our attention from the educational point of view, but offers little for consideration as regards prophylaxis although consanguinity in marriage, and especially the marriage of deaf-mutes, are predisposing factors.

Acquired deafness constitutes eighty-five per cent of the cases of impaired hearing. Most acquired deafness has its onset during the first decade of life, and ninety per cent of it is

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

preventable. Deafness is not a disease, but a symptom. Involvement of the sound conductive apparatus of the ear produces obstructive or catarrhal deafness. Involvement of the sound perceiving apparatus produces perceptive or nerve deafness. Deafness caused by disease of the sound conductive apparatus is by far the most common type and is due to changes in the structure of the middle ear, which invariably result from the extension of inflammation of the nose or throat through the Eustachian tube. Both catarrhal and suppurative conditions contribute to the changes that produce this type of deafness. As etiological factors in catarrhal or obstructive deafness, diseased tonsils and adenoids rank first. However, all nasal obstructions, hypertrophies, and both acute and chronic infections of the nares, the nasal sinuses, the nasopharynx, and the pharynx are contributing causes.

In the catarrhal or non-suppurative otitis media, the onset is so insidious and extension so gradual that structural changes in the middle ear, resulting in permanent loss of hearing have often taken place before aid is sought. The repeated earaches in childhood are due to catarrhal inflammation of the middle ear which results in impaired hearing. Children who have frequent or chronic colds, and all mouth breathers, are potential deaf patients.

Suppurative inflammation of the middle ear is a frequent cause of deafness and is usually recognized early because of its sudden onset and the severity of its symptoms. This condition is a frequent complication of the exanthematous diseases of childhood. In acute suppurative otitis media, early and adequate incision of the tympanic membrane results in resolution with no loss of hearing in the majority of the cases. Neglect or improper treatment cause a chronic suppurative process and impaired hearing with danger of mastoid involvement and intracranial complications.

Nerve deafness is usually due to causes remote from the ear. Constitutional diseases, especially syphilis, are frequently the cause. Occasionally, it results from the toxic effects, in susceptible individuals, of certain drugs as quinine, arsenic and the salicylates. However, most cases of acquired nerve deafness are due to foci of infection.

In chronic infections of the nose and throat, a dual situation exists. By continuity, the inflammation of the mucous membrane may

extend into the Eustachian tube and the tympanic cavity, producing a catarrhal deafness; and, at the same time, the nerve of hearing may be involved from the absorption of toxic material. In this event, the so-called "mixed deafness" results.

As an etiological factor of deafness, the nasopharyngeal group of conditions is the most important and the most amenable to treatment. This consists of local inflammatory conditions caused either by the acute infectious diseases, especially by scarlet fever, measles, diphtheria and influenza or by diseased tonsils and adenoids, acute and chronic nasal infections, including diseases of the accessory sinuses, obstructions of the nose due to septal deflections and turbinate hypertrophies.

IV. Solution of the Economic and Social Problem due to Deafness:

The tragedy of deafness should command the attention of parents, educators and physicians. Parents should be instructed regarding the latent danger of neglected nasal obstruction and chronic inflammations of the nose, throat and ears in children. They should be made to feel the responsibility of their children's future, and protect their hearing as far as possible by periodic examinations and proper treatment when indicated.

It is a function of our public school authorities to institute and conduct regular periodic examinations of the ears of all school children. These examinations should be adequate to detect even slight hearing loss. Where deafness is found, it is the duty of educators to provide special arrangement of instruction for these pupils, and to prevent thereby as far as possible repetition of courses on the part of those with sub-normal hearing and the retardation of the progress of those with normal hearing.

As physicians, it is our duty to recognize the fact that the most important treatment of deafness is preventive treatment. We must realize that since the harm is done before deafness is noticed, we must pay more attention to the etiological factors in childhood. Children subject to earache should not be allowed to go without a hearing test; and if the hearing is found involved, remedial measures should be started at once. The removal of tonsils and adenoids is of vital importance. Irrespective of age, there should be no question about their removal when middle ear trouble occurs.

By co-operation between the medical profession, members of school boards and public health authorities, a campaign of education should be inaugurated. Attention should be directed not only upon the prevalence of aural affections and the characteristic insidiousness of their development, but especially upon the conditions which render the aural mechanism susceptible to disease, and the fact that most of these causes are susceptible to effectual eradication.

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Abstract

CANCER SUPERVENTION IN SKIN DISEASES

The importance of the early recognition of the various types of cancer has always been emphasized. This is due to the fact that the percentage of cures can be raised considerably when malignant tumors are treated radically at their inception. If this is true, it should also be important to recognize the pathologic conditions that might be forerunners of cancer and to eradicate them. In this paper Joseph Jordan Eller and Nelson Paul Anderson, New York (Journal A. M. A., Feb. 8, 1930), endeavor to show, as a result of their investigative work, as well as that of other workers in the dermatologic field, that there are more than twenty skin conditions which may be the forerunners of cancer: syphilis; leukoplakia; radiodermatitis; moles (also malignant lentigo, melanotic whitlow); senile keratoses; seborrheic keratoses; kraurosis vulvae; occupational keratodermas (tar, pitch, arsenic dust, oil, heat); lupus vulgaris and tuberculosis cutis; arsenical keratoses; sebaceous cyst; lupus erythematosus; chronic ulcers (varicose ulcers, pellagrous ulcers, fistulas); Paget's disease of the nipple; cicatrices; cutaneous horns; Bowen's disease; extra-mammary Paget's disease; papilloma of the tongue; xeroderma pigmentosum; blastomycosis; inflammatory dermatoses (psoriasis, lichen planus, eczema). The possibility and probability as well as the frequency with which cancer follows the conditions enumerated are considered separately and in their approximate order of importance. Other types of malignancy, such as sarcoma, leukemias, granulomas such as mycosis fungoides, epulis, and lymphosarcoma have been omitted in this paper. Included are the diseases or conditions that are precursors of basal and prickle cell cancers and melanocarcinomas.

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

BRIGHT PROSPECTS FOR OUR ANNUAL MEETING

This year's annual meeting of the Arkansas Medical Society will be held at Fort Smith, May 6, 7, and 8, and, reading what follows, you will readily believe that it will be one of the best ever held in more than a half century's existence of the Society. It will introduce features never before seen at an Arkansas convention, including a Clinical Day session by invited guests and another feature that may be termed a motion picture clinic.

Dr. J. H. Buckley, President of the Sebastian County Medical Society, has appointed the usual committee on arrangements and with the promised hearty co-operation of the entire medical profession of Fort Smith the indications are not only for a meeting long to be remembered from the scientific program, but for the social functions arranged for both the members and the ladies, of which will be in keeping with the city's established reputation for hospitality.

(A note en passant—The editor will never forget the most cordial reception given in his honor on January 10, 1928).

Headquarters for the convention will be at the Goldman Hotel where the meetings also will be held. The registration desk will be located with the commercial exhibits, and some one will be on duty at all hours.

The principal entertainment will be given on the second night. It will be a reception for the president; banquet, together with a fine program by professional entertainers. Tickets for this affair will be on sale at the registration desk, the price is two dollars, and from all accounts either banquet or show would be worth what the ticket to both costs. It will be a social function for the members and the ladies one cannot afford to miss.

The scientific exhibit, as reported by W. R. Brooksher, Jr., will feature the following:

American Federation of the Organizations for the Hard of Hearing, Inc., Washington, D. C.; American Society for the Control of Cancer, New York; American Association of Hospital Social Workers, Chicago; National Board of Medical Examiners; U. S. Department of Agriculture—Tuberculosis Eradication Work in Cattle.

In addition, he has arranged for the Mine Rescue Car of The Bureau of Mines stationed

at McAlester, Oklahoma, to be present for the meeting in charge of an engineer and experienced safety man.

The scientific program as prepared by the committee headed by Dr. R. J. Calcote makes the following preliminary announcement:

As our guests:

Dr. Edward H. Skinner, roentgenologist of Kansas City.

Dr. Ernest Sachs, neurological surgeon of St. Louis.

Dr. M. Edward Davis, obstetrician of Chicago.

Dr. R. F. Liseher of Mascoutah, Illinois, that inimitable champion of the Country Doctor.

Dr. Liseher will present two addresses before the Society on the subjects: "The Country Doctor of Yesterday and Today," and "A Pen Picture of the Country Doctor."

In addition to the foregoing, there has been arranged a new and very attractive addition to the program, consisting of five motion picture films on medical and surgical subjects. Dr. Davis of Chicago will present an obstetrical film; two films on cancer as part of the report of the Cancer Control Committee, by courtesy of Dr. Dewell Gann, Jr., Chairman; two films prepared by the Eastman Kodak Company for the American College of Surgeons. The latter two will be on "Infections of the Hand" and "The Technique of Blood Transfusion." There has also been arranged for some twenty odd papers by some of the best talent the State has to offer.

In regard to the motion pictures that we have arranged for, is truly a new, attractive, and educational feature. The American College of Surgeons, says, "The value of motion pictures for medical instruction, as produced by the Eastman Film, Inc., is gradually becoming more appreciated. For the medical student they can never replace experience gained from personal contact with disease; nor can they supplant well established methods of teaching medicine. But as an adjunct to the methods in vogue at present by facilitating the instruction, conserving the time of students and teachers and by economy of materials are of inestimable value. Naturally, such statements pre-suppose high grade production. Accuracy as to scientific detail, good cinematographic technique and the best of photographic quality are primary requisites. With these qualities incorporated motion pictures acquire considerable value in all branches of

medical science. "From the surgical standpoint, the motion picture can bring to the profession the work of the outstanding surgeons. No one will pretend to claim that surgery can be taught by motion pictures, but motion pictures of certain operations, carefully selected for their adaptability to photography, can demonstrate successfully many of the fundamentals of surgical technique as practiced by leading surgeons. Comparisons of differences in the details and mechanics involved can serve as an introduction to the beginner and lead to a broader and more comprehensive understanding of the subject. By this method the best work can be available to all present and in the future, aside from all historical and sentimental considerations, such records will have a very practical value for posterity."

It is practically impossible to convey in mere words an idea of these wonderful pictures to be shown for the first time in Arkansas.

It is just one of those things to be seen rather than described. One can scarcely imagine any physician staying away from such marvellous exhibits and it is due our Fort Smith and Sebastian County hosts to show our appreciation of their work in providing so many valuable features for our edification and pleasure. Let every one of us be there.

The complete program will appear in the April issue of The Journal.

Personal and News Items

Dr. O. D. Ward of England was a recent visitor to Little Rock.

Dr. C. M. Peeler of Pangburn visited in Little Rock last month.

Dr. I. M. Huskey of Morefield has moved to Cave City.

Dr. J. S. Westerfield of Conway was a recent visitor to Little Rock.

Dr. and Mrs. J. C. Minor of Hot Springs were recent visitors to Little Rock.

Dr. and Mrs. C. G. Hinkle visited in Little Rock last month.

The annual dues for 1930 are now delinquent. Send \$5.00 plus your local County Society dues to the Secretary of your County Society at once.

Dr. J. D. Riley, former Ashley County physician, and for the past nine years head of the Southern Baptist Sanatorium at El Paso, Texas, was elected superintendent of the Arkansas Tuberculosis Sanatorium.

The Dallas County Medical Society met at Princeton, January 30, 1930. Officers for the ensuing year were elected as follows:

Dr. H. H. Atkinson, Fordyce, President; Dr. H. A. Cheatham, Princeton, Vice-President; Dr. J. E. M. Taylor, Sparkman, Secretary-Treasurer; Dr. H. A. Cheatham, Princeton, was elected delegate to the State meeting, and Dr. J. E. M. Taylor, Sparkman, alternate.

The next meeting will be held at Fordyce, March 13.

More than 100 staff surgeons of the Southern District of the Missouri Pacific Lines were registered February 17 at the Missouri Pacific Hospital, Little Rock, for the annual clinic and scientific lecture meeting. The Southern District embraces Arkansas, Louisiana, Tennessee, Oklahoma, Mississippi and Southern Missouri.

The clinics were conducted by Dr. D. A. Rhinehart, Dr. M. J. Kilbury, Dr. W. A. Kriesel, Dr. H. Fay H. Jones, Dr. W. F. Smith and Dr. S. B. Hinkle of Little Rock.

Lectures and scientific session included Dr. W. F. Smith; Dr. Wilbur Smith, Springfield, Mo.; Dr. R. L. Smith, Russellville; Dr. B. M. McKain, Monroe, La.; Dr. Cecil Bryan, Vinn, Okla.; Dr. R. H. T. Mann, Texarkana; Dr. William Britt Burns, Memphis; and Dr. Kilbury and Dr. Hinkle.

The National Tuberculosis Association is making an effort to arouse the public to the significance of childhood tuberculosis.

In connection with the campaign that will be made during April, which is to be strictly educational, they have produced a manual, "The Childhood Type of Tuberculosis." It is said to be the clearest and most concrete treatise thus far compiled on the difficult subject of childhood tuberculosis. A copy of the manual will be available through most of their affiliated State and local tuberculosis associations.

The Howard-Pike County Medical Society elected officers for 1930 as follows: President, E. V. Dildy, Nashville; Vice-President, J. M. Holt, Nashville; Secretary-Treasurer, W. Ridley Lee, Mineral Springs; Delegate to the State Society, W. H. Toland, Nashville, and Alternate, J. T. Holcombe, Mineral Springs.

The Hempstead County Medical Society elected the following officers for 1930:

President, W. M. Garner, Hope; Vice-President, W. P. Parker, Hope; Secretary-Treasurer, R. R. Robins, Hope; Delegate to the meeting at the State Society, J. H. Weaver, Hope, Alternate, G. E. Cannon, Hope.

A verdict in favor of the defense was rendered by Judge J. M. Shinn, presiding in a Circuit Court case involving school children vaccination laws of Arkansas. Judge Shinn ruled that the State Board of Health was given authority under the present laws to decide the manner and the substance used in vaccinating school children.

The case arose when children of Dr. T. S. Allen were refused admittance to school after having been vaccinated by Dr. C. F. Ellis, using homeopathic methods. The School Board objected to this form of vaccination and was sustained by the State Board of Health.

It was announced that the case would be appealed to the supreme court.

THE PORTER ANTINARCOTIC BILLS

In The Journal, February 8, the leading editorial concerned the Porter antinarcotic bills and called on the medical profession to oppose this legislation for numerous reasons. February 14, Congressman Porter caused to be published in the *Congressional Record*, and issued to the Hearst newspapers, and apparently to these newspapers alone, a reply to this editorial. The reply was received in the headquarters office of the American Medical Association, February 17. The wide publication it has already had makes unnecessary a repetition in our columns. It offers nothing new in evidence or argument to cause any change in the point of view expressed in our original editorial. The Journal still feels that all the power the medical profession can wield must be mustered to the defense of the right of physicians to practice medicine without further bureaucratic molestation.—*Jour. A. M. A.*, Feb. 22, 1930.

The Dallas Southern Clinical Society meeting will extend from April 14th to 18th inclusive. The day will be divided into morning and afternoon sessions. Mornings will be given over to clinics and hospital demonstrations. Afternoons will be given to general meetings when several distinguished guests of national reputation will address the entire assembly. In addition to the morning clinics, there will be three mornings in which post-graduate lectures will be given to attending physicians by members of the Dallas Southern Clinical Society. These post-graduate lectures will be given at the Baker Hotel. The general assemblies each afternoon will be held in the Crystal Ball Room at the Baker Hotel. In addition to the scientific sessions, there will be three Round Table luncheons given and in addition to these luncheons there will be two banquets in the evenings. The Registration fee of \$10.00 will include not only all scientific matters, but the luncheons and banquets as well.

FOR SALE: Set of Lewis' Surgery, nine (9) volumes; three more volumes to follow as soon as published. Price for complete set, eighty-five (\$85.00) dollars. Address, Dr. Loyd Thompson, Thompson Building, Hot Springs, Arkansas.

FOR SALE: Instruments and office fixtures. Excellent opening for eye, ear, nose and throat specialist. No competition. Healthful Arkansas town. For particulars address: F, in care Journal, Arkansas Medical Society, 814 Boyle Bldg., Little Rock.

AUXILIARY NEWS NOTES

The Woman's Auxiliary of the Union County Medical Society met February 7, at the Y. W. C. A. Mrs. Martin V. Russell presided over the business session. Mrs. J. B. Wharton gave a report of the Christmas seal sale and presented the need of tuberculosis work in the county. Mrs. G. D. Murphy gave an interesting talk on Madam Curie and her work. Musical numbers were given by Miss Helen Graham Patterson and Miss Marian Geren. The next meeting will be a social one with Mrs. E. J. Munn, Mrs. G. D. Murphy and Mrs. A. D. Cathey hostesses. Mrs. H. H. Niehuss will be chairman of the program committee.

The Woman's Auxiliary to the Independence County Medical Society is wide awake and trying to do some worthwhile work. They sponsored the lecture by Dr. Cramp, who is sent out by the American Medical Association. An appreciative audience heard his lecture.

A benefit card party was given at the Country Club and forty-five dollars of the amount realized was sent to the Student Loan Fund.

They have placed Hygeia in the schools of Batesville and six other towns of the county.

They are assisting the Red Cross nurse in many ways, and will soon give a luncheon to her Nursing Activities Committee. This committee consists of about thirty women from over the county.

(Reported by MRS. L. T. EVANS, Batesville)

CORRESPONDENCE

Dr. William R. Bathurst, Editor,
Journal of the Arkansas Medical Society,
Boyle Building,
Little Rock, Arkansas.

Dear Dr. Bathurst:

You have doubtless been advised from our National headquarters that April has again been set for the Early Diagnosis Campaign, with special emphasis placed on childhood tuberculosis. Much research work is being done in this particular field and the results will be embodied in a pamphlet prepared by Dr. Chadwick of Detroit. We are asking all the county medical societies to devote their April programs to childhood tuberculosis and are offering to send speakers to the first few which make a request.

We can furnish several copies of Dr. Chadwick's pamphlet for all of the societies.

We will deeply appreciate your giving publicity to this in the Journal. A number of our volunteer chairmen are organizing the Early Diagnosis Campaign in their communities and will unquestionably call on the physicians for some talks and we will feel personally obligated if they will kindly respond.

Thanking you most cordially,

Sincerely yours,

Erle Chambers,
Executive Secretary.

Obituary

CARGILE, CHARLES HASTINGS — Dr. C. H. Cargile of Texarkana died in Dallas, Texas, February 13, 1930. Aged 77. He was graduated from Jefferson Medical College, Philadelphia. He first practiced at Okolona, moving to Bentonville in 1893, where he remained until six years ago.

Dr. Cargile was a former President of the Arkansas Medical Society and a member of the first Board of Trustees of Henderson College, Arkadelphia.

He is survived by his widow, four children, L. C. Cargile of Texarkana, Clifton Cargile of Houston, Texas, Miss Frances Willard Cargile of Carthage, Missouri, and Miss Alice Catherine Cargile of Texarkana.

MURPHY, FRED THOMAS—Dr. F. T. Murphy of Brinkley died suddenly, February 17, while visiting in Memphis. Aged 62. He was born in Forrest City, and moved to Brinkley upon graduating from medical college.

Dr. Murphy was surgeon for the Rock Island Railroad, a member of the Rotary Club and the Chamber of Commerce and one time Secretary State Board of Medical Examiners.

He is survived by his widow; a son, Fred Murphy, Jr.; a daughter, Mrs. Lawrence H. Bradley; two grandchildren; three sisters and two brothers.

County Societies

ARKANSAS COUNTY

(Reported by E. B. SWINDLER, Sec.)

The Arkansas County Medical Society met at the Hotel Riceland, February 10, 1930. This was the first meeting of the year; the January meeting being postponed on account of bad weather.

Officers for 1930 were elected as follows:

S. A. Drennen, Stuttgart, President; A. Fowler, Humphrey, Vice-President; E. B. Swindler, Stuttgart, Secretary. S. A. Drennen was elected delegate to the State meeting and C. E. Park, alternate.

The scientific program consisted of the following:

“Otalgia” by Dr. K. W. Cosgrove, Little Rock.

“Care of the New Born,” by Dr. C. W. Rasco, DeWitt.

The next regular meeting will be held in DeWitt the second Tuesday in March.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society was the guest of the physicians of Stephens at the monthly meeting February 6. The meeting was held at the Dixie Hotel where a banquet was served.

The following physicians were present: Rinehart, Jameson, McGill, Woolridge, Powell and Robins of Camden; Kenerly of Bear den; Ritchie of Ogemaw; Clements of Mount Holly; Partee, Sam Thompson, J. S. Thompson and J. F. Evans of Stephens. Drs. Carruthers and Jackson of Little Rock were guests.

The scientific program consisted of illustrated talks by Dr. F. W. Carruthers and Dr. Geo. Jackson of Little Rock. Dr. Carruthers spoke on “Fractures” and Dr. Jackson spoke on “Certain Skin Diseases.”

HEMPSTEAD COUNTY

(Reported by R. R. ROBINS, Sec.)

The Hempstead County Medical Society met in the City Hall at Hope, February 6. Present: Allison, Cannon, Carrigan, Garner, Lile, G. H. Martindale, J. G. Martindale, Luck, McDonald, Parker, Robins, and Weaver.

The following officers were elected for 1930:

President, W. M. Garner, Hope; Vice-President, W. P. Parker, Hope; Secretary-Treasurer, R. R. Robins, Hope; Delegate to State meeting, J. H. Weaver and Alternate, G. E. Cannon.

Dr. R. L. Wood of Fulton was elected to membership.

A call meeting was held February 20, 1930, for the purpose of discussing an editorial appearing in the February 8th issue of the Journal of the American Medical Association, namely, “A Federal Narcotic Dictator.” The editorial was read by Dr. Smith. After discussion, a committee was appointed to draft a resolution to be sent to the Senators and Congressman protesting the passage of the bill.

The resolution drafted by the committee follows:

We, the members of the Hempstead County Medical Society wish to file our bitter protest against H. R. 9054 and H. R. 9053, bills presented by a Mr. Porter placing the authority to issue narcotic licenses in the hands of one man. As we understand the bill, the narcotic Czar could revoke any physician's license in any State and put the burden of proof in any case on the physician. We object to this one man authority and most respectfully urge you to vote and work against any such measure.

POPE COUNTY

(Reported by W. P. SCARLETT, Sec.)

The Pope County Medical Society met in regular monthly session, February 13. A plate luncheon was served at the Angher House at 7:00 p. m., after which an interesting paper on "Medical Ethics" was presented by Dr. G. C. Webb.

Election of officers was held and the following were elected: President, C. J. Ross, Dover; Vice-President, E. P. Griffin, Atkins; Secretary, W. P. Scarlett, Russellville; Delegate to the meeting of the State Society, A. B. Tate, Russellville and Alternate, C. J. Ross.

GARLAND COUNTY-HOT SPRINGS

(Reported by GASTON A. HEBERT, Sec.)

The regular meeting of the Garland County-Hot Springs Medical Society was held February 11, and was well attended, there being more than fifty members present.

Major Meister of the Army and Navy General Hospital completed his very interesting series on the "Allergic Diseases," and Dr. F. W. Carruthers of Little Rock presented a most interesting paper on "Fractures."

A memorandum to the Secretary of the Interior requesting that the physicians of Hot Springs be relieved of a \$60.00 tax for prescribing the waters was approved by the Society.

Dr. W. T. Wootton inaugurated investigation of the feasibility of a plan of combination of the bath houses in order that they might be classified for the treatment of different diseases. This will be acted upon at the next meeting.

Radio talks will begin immediately. They will consist of papers written by members of the local Society, as well as others on public health matters, which have been furnished by the American Medical Association. A "Question and Answer" period will also be conducted immediately following each broadcast. There is a move on foot for the use of several physicians as an unpaid Medical Intelligence Bureau, who will see that communications relative to health questions, which are frequently received by the Chamber of Commerce will have a satisfactory answer.

Book Reviews

Gould and Pyles Pocket Cyclopedia of Medicine and Surgery.—Third edition, revised, enlarged and edited by Dr. R. J. E. Scott, New York. Published by P. Blakiston's Son & Co., Philadelphia.

This small volume gives the results of wide medical and literary experience. It is a very valuable book for immediate information.

A Compend of Diseases of the Skin.—By Jay F. Schamberg, M. D., Professor of Dermatology and Syphilology, School of Medicine, University of Pennsylvania, Eighth Edition. 126 Illustrations. Published by P. Blakiston's Son & Company, 1012 Walnut Street, Philadelphia. Price, \$2.00.

In addition to a brief review of diseases of the skin, the author gives a resume of the modern treatment of syphilis, including that of the central nervous system.

Diseases of the Nose, Throat and Ear.—By E. B. Gleason, M. D., Professor of Otolaryngology, Graduate School of the University of Pennsylvania. Sixth Edition, Thoroughly Revised. 12mo of 617 pages with 262 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth \$4.50 net.

The author of this manual gives a very careful description of the details of examination; diagnosis and for the applications for diseases of the nose, throat and ear conditions.

Spinal Anesthesia. Principles and Technique. By C. H. Evans, East Orange, N. J. Introduction by Dr. W. Wayne Babcock and a foreword by Dr. C. G. Heyd. 41 illustrations, 3 in color and one folding colored plate. Published by Paul B. Hoeber, Inc., New York. Price, \$5.50 net.

Dr. Babcock says in his introduction that the author has selected efficient, technical methods of great value by those who would prepare themselves for the use of spinal anesthesia.

The Infant and Young Child.—Its care and feeding from birth until school age. A manual for Mothers. By John Lovett Morse, M. D., Edwin T. Wyman, M. D., and Lewis Webb Hill, M. D., of Harvard Medical School and Children's Hospital, Boston, Mass. 12mo of 299 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, \$2.00 net.

This new edition presents a fund of up-to-date information on all matters pertaining to the rearing of the infant and young child.

New sections are given showing the value of ultraviolet light, and richets, particularly because so much misinformation has been given by certain manufactures of lights for this purpose.

Injection Treatment of Internal Hemorrhoids.—By M. C. Pruitt, M. D., Atlanta, Ga. Published by C. K. Mosby Company, St. Louis. Price \$3.00.

This small volume is presented to show the value of the injection treatment of internal hemorrhoids. Nine illustrations are given.

The Surgical Clinics of North America.—(Issued serially, one number every other month.) Volume 9, number 2. (Chicago Number—April, 1929) 243 pages with 70 illustrations. Per Clinic year (February, 1929 to December, 1929.) Paper \$12.00; Cloth \$16.00. Published by W. B. Saunders Company, Philadelphia.

The first presentation in this valuable group is the clinic of Dr. Arthur Dean Bevan, Presbyterian Hospital, Chicago. He discusses a very important general proposition in abdominal surgery, that is the group of conditions with acute symptoms which have led to the coining of the term, "acute abdomen." Nineteen other clinics are shown in the table of contents.

The Writing of Medical Papers.—By Maud H. Mellish-Wilson, Editor of the Mayo Clinic Publication. Third Edition, Revised. 12mo of 184 pages. Published by W. B. Saunders Company, Philadelphia, 1929. Cloth, \$1.50 net.

While this little book is extremely valuable for those who edit, read proof, etc., it should be very desirable, at least we recommend it, for those writers of medical papers who expect their papers to be published.

Among many subjects of interest it gives general rules in capitalizing, standard abbreviations, punctuation, grammatical notes, don'ts, subject matter, length of papers, etc.

Surgical Pathology—By William Boyd, M. D., Professor of Pathology, University of Manitoba, Winnipeg, Canada. Second Edition, Revised and Reset. Octavo of 933 pages, with 474 illustrations and 15 colored plates. Published by W. B. Saunders Company, Philadelphia. Cloth, \$11.00 net.

The author of this volume presents those aspects of pathology which are the most useful to the surgeon.

Amongst other subjects which are considered for the first time, or to which new material has been added, may be mentioned Cadhom's work on the treatment of septicemia, tissue cultures, precancerous lesions, carotid body tumors, tumors of the xanthoma group, the etiology of rickets, and the recent criticisms of Sampson Hanley's views on lymphatic permeation.

Fifty-fifth Annual Meeting

of the

Arkansas Medical Society

will be held

May 6, 7, 8, 1930
Fort Smith



Headquarters—Goldman Hotel
Complete Program will appear in the
April Issue



Have You Paid Your Dues for 1930?
\$5.00 Goes to the State Society

THE JOURNAL

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No. 11

Original Articles

INGUINAL HERNIA*

W. F. SMITH, M. D., F. A. C. S.
Little Rock

Careful investigation has shown that one in every thirty males has an inguinal hernia. The congenital cause for hernia is well recognized and a marked family tendency to the condition exists. The possessor of a hernia may suddenly become aware of ownership, but in reality the title was a birthright.

The general conditions predisposing to or actually resulting in or producing hernias are:

1. Congenital developmental defects.
2. Increased abdominal pressure.
3. Decreased resistance of the abdominal wall.

The descent of the testicle and the associated changes, when imperfect, account for the great frequency of the inguinal form of hernia in males (about 90 per cent) as compared with other forms.

Under the head of increased abdominal pressure may be placed occupations requiring

much muscular effort, especially in a stooped position or during forced inspiration, vesical or rectal tenesmus or violent coughing.

The decreased resistance of the abdominal wall may be due to illness, old age, prolonged distention, excessive corpulence, or emaciation. Age is also a predisposing factor, as frequent occurrence is seen during the first year of life, due probably to developmental defects, then again the rate of occurrence increases around puberty on account of the more active habits and beginning work.

Trauma is not considered one of the causes of hernia. The immediate symptoms would be pain, nausea, considerable shock, vomiting, and later there might be bloody stools. There would be swelling and localized tenderness and later an ecchymosis over the injured area.

It is impossible for a single trauma to produce a fully developed hernia. The anatomy of the parts is against an occurrence of this nature. To have this happen it would be necessary to have a sudden dilatation of the internal ring large enough to admit a loop of intestine. This would of necessity be forced through a suddenly dilated canal and on through a stretched external ring and on through the scrotum, as these hernia of alleged traumatic origin are always complete.



The sac opened.



The sac dissected up.

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

An operation reveals a well developed sac, firmly adherent to the cord and vessels and containing intestines and omentum, many times strongly adherent to the sac.

A direct hernia, in which the protrusion is direct into the canal in the space between the outer edge of the rectus muscle and the epigastric artery, in which space the abdominal wall is very thin; as it contains no muscular layer and is weakened anteriorly by the gap in the external oblique fascia at the external ring, especially at its upper and outer angle, the posterior wall of the canal at this point not being reinforced by the presence of the conjoined tendon or the inner deep fibres of Poupart's ligament (Colles' ligament) would much more likely be of traumatic origin than the indirect or oblique type. The reverse is true, however, as the direct hernias occur in only from three to five per cent of the cases.

In our experience we have never seen an inguinal hernia present any signs of trauma. Many times a surgeon is called upon to give an opinion as to what influence a given accident may have had on an already existing hernia. It is quite true that any sudden increase of intra-abdominal pressure may aggravate or increase the symptoms of the existing hernia. The degree that the employing company was negligent or liable for the cause of this abdominal pressure is the question to decide, but it should not be called to account for the hernia itself.

To devise an operation for the radical cure of hernia has been the problem of many surgeons. Following is a brief description of the technic of the operation we have used with fairly successful results for a number of years:

1. Dissecting sac from cord and vessels.
2. Sac dissected out.
3. Stump of sac showing infundibuliform fascia.

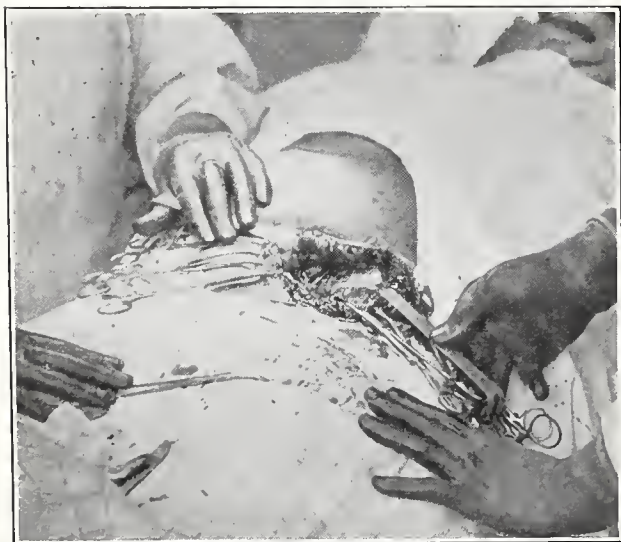
4. Infundibuliform fascia united.
5. Showing a deficient development of conjoined tendon.
6. Conjoined tendon restored.
7. Uniting internal border of divided external oblique fascia to the shelving part of Poupart's ligament and reconstructing the external ring.
8. Uniting fascia to external oblique.
9. Uniting external border of divided external oblique fascia to the fascia of the external oblique.
10. The fascia of the external oblique united.
11. Uniting Scarpa's fascia.
12. The wound closed.
13. Showing completed operation and a scar of a herniotomy done on opposite side four years ago.
14. et seq. Hernia sacs.

DISCUSSION

CHAIRMAN MANN: Is there any discussion? Dr. Kittrell, won't you discuss it?

DR. T. F. KITTRELL, Texarkana: This is unexpected. I didn't intend to say anything about the subject. I don't know that I can add anything to what Dr. Smith has said. It seems to me that the chief point in operating on inguinal hernia is to get the sac tied off high enough. That is one of the most important things. I think we all agree on that. Then, imbricating the muscles, I believe, as Dr. Smith did in his case, making the support very much better. I don't think I have ever seen a case of so-called traumatic hernia. I think, as Dr. Smith says, we practically never have them. It would be impossible to get them except by some direct trauma which would show very plainly externally aside from the hernia. I enjoyed the doctor's paper very much.

DR. SMITH, in response: Dr. Kittrell, I think, mentioned the principal factor in the success of these operations, and that is dissecting the sac high enough and tying it high enough and letting it drop back. That, I think, is the principal feature in this operation.



The conjoined tendon reconstructed.



The fascia of the external oblique reunited.

FIVE YEARS' EXPERIENCE WITH RADIOTHERAPY IN UTERINE CONDITIONS*

J. S. WILSON, M. D., Monticello

When, in 1909, Cheron reported to the French Academy of Medicine the treatment of 120 cases of uterine fibroma with intra-uterine application of radium he opened up a field of therapeutics which has probably caused more controversy than any in existence.

Opinions of medical men have varied from one extreme of those who held that the use of these physical agents was outright criminal to those who thought they were a panacea for a group of conditions which had, in the past, baffled all medical skill. The true facts are that both extreme views are wrong. However, none who will read the reports of reliable medical centers can doubt that these physical agents have proven a marked benefit to the armamentarium of therapeutics.

In radiotherapy in general, and uterine conditions in particular, there has seemingly been a marked difference as to what the best methods of application were. Lawrence, of Memphis, Tennessee (1), speaking before the Radiological Association of North America, in 1928, deplored the lack of uniformity of dosage and technic in this field. I am persuaded, however, that there is a more marked uniformity than lack of it in at least four or five of the world's best organized groups or centers in this matter.

A few examples of this uniformity can be seen in the published reports of such organizations as The Mayo Clinic, at Rochester (2), Schmidt of Chicago (3), Regaud of Paris (4 and 5) and The Memorial Hospital of New York (6). At all of these centers a technic very similar is followed, except the Memorial Hospital Group give theirs in a markedly different way. In the one major uterine condition coming to radiotherapy, cervical cancer, we find the total amount of radiation given by all these medical groups practically identical. The method of one, The Memorial Hospital, differs from the others in that they apply a large amount of radium, usually a gram, in the uterus, for three or four hours and a like amount against the cervix through their

intravaginal bomb. To this they add external radiation from the *x*-ray or a radium pack over the abdomen.

The technic used by Schmidt, The Mayo's, and Regaud has been published in so many medical journals, and can be seen by anyone attending these clinics until it is familiar to most of us. All of these clinics give a large total dose of radiation by intra-uterine and intracervical application of small amounts of radium, given over a long period of time, until a total desired dose of from 4,000 to 8,000 mg. hrs. is given. In all of these clinics the *x*-ray is used from without in addition to the internal radiation from radium. The amount of *x*-ray radiation given is usually the amount of skin toleration.

Regaud of Paris, is given credit for the largest per cent of cures in uterine cancers of any one individual in the world. However, his technic so closely simulates that of the two American centers mentioned that it seems impossible there should be any marked difference in results.

Maurice Lenz (4) in the American Journal of Roentgenology for March, 1927, published his observations of Regaud's work; and Harold Swanberg (5), read before the Radiological Association of North America in 1928, his observations of the same clinic; these two reports are identical and can well serve as a basis on which to judge the work of the great French therapist.

To me the work of Schmidt in determining dosage on water phantoms has done as much or more than any with which I am familiar to determine the proper dose in these conditions. All who have read his reports know that he has shown that with radium properly screened and placed intra-uterine, that the first cm. of tissue surrounding the radium capsule receives a lethal dose for tumor cells at 1200 mg. hours the second cm. at 1800 mg. hours, the third cm. at 3600 hours, and the fourth at 7200 mg. hours. This amount of internal radiation from radium I am of the opinion the maximum amount that can be used with safety, and still leaves much of the para-uterine tissues insufficiently radiated. This tissue beyond the lethal reach of internal radium can be reached by external radiation usually administered from the *x*-ray.

We have treated approximately 120 cases of different uterine conditions with radiotherapy since and including 1923. The first 100 of

*Read before the 54th Annual Session of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

these patients, taken as they came, forms the basis of this report. All treatment of these patients has been accomplished with 50 milligrams of radium and an *x*-ray transformer with a peak volt rating of 135 kilovolts. The technic we have used has consisted of intra-uterine application of radium, filtered through 0.5 mm. of silver, 2 mm. of brass, and a rubber covering over this, usually of 3 mm. of para rubber. This radium application is given in 1200 mg. hour doses and repeated every twenty-four hours until a total dosage of from 4000 to 7200 mg. hours is given. We have never used as much as 7200 mg. hours, but twice. To this amount of internal radium radiation we have usually added four hours *x*-ray radiation, given through four portals, two anterior and two posterior. This *x*-ray radiation has always been given at the maximum voltage of our transformer at 10 inches distance through 0.5 mm. of Cu. and 0.5 mm. Al, and a heavy piece of sole leather placed on the skin of the patient, using 3.5 milliamperes of current. I know this is heavy filtration for this type of *x*-ray, but our attempt has been to filter out all the soft rays that we could, and at these values, 25 per cent of the radiation striking the skin should be effective to the para-uterine tissues. Basing our dosage on this, we have used the amount of *x*-ray radiation which will produce a bronzing of the skin and cause involution of a local lesion.

Of the 100 patients of this report, 26 were diagnosed as functional menorrhagia or metrorrhagia, in these no organic lesions could be found. All these patients were treated with radium of 1200 to 2400 mg. hours, or an hour over each ovary with the *x*-ray. Practically all of these patients have been relieved and are satisfied with their treatment. The condition of twelve of these 100 patients was diagnosed as non-malignant fibroids, and all of them, with one exception, were treated as above mentioned functional menorrhagias. The results in these cases have been entirely satisfactory. One case should have special description. A negro woman of about 45 years of age, who had a history of uterine tumor for 14 years, which had grown rapidly during the last year. She had hemorrhaged for the past three months, until she was bedridden. Before I saw her, I was made to promise through her husband, that I would undertake no surgical operation, for the dread of surgery had been the cause of her neglecting

herself. When examined, she was found to be in such condition that surgery was contra-indicated, and after consultation, it was decided to depend on radiotherapy. The tumor reached well above the umbilicus, was nodular and her hemorrhage was excessive. It was found that the interior of the uterus was very irregular, due to submucous growth of the tumor.

She was given 4800 mg. hours of radium intra-uterine and two hours of *x*-ray from the anterior portals, the rays being directed so they would converge in the center of the tumor.

This treatment was given March, 1925, and after a few months she was doing ordinary farm labor, and is apparently well and free from any evidence of her tumor at this time. I know this is a very heavy dose of radiation to give a fibroid, but the ease was exceptional, and frankly, the treatment was undertaken to some extent from the experimental standpoint.

Sixty-two of this group of patients were diagnosed as malignant neoplasms of the uterus or cervix. Two of them were of the fundus and sixty of the cervix. The reason for giving radiotherapy to the two fundus cases was because both of them were bad surgical risks, and one being referred to me by a surgeon who would not take the risk of operating upon her. She is alive and in good condition at the end of two years. The second fundus case was a large fibroid uterus which had undergone carcinomatous degeneration, and her treatment was given for palliation only. She died within six months of treatment.

Fourteen of these patients are dead at this time. One of these was a cancerous degeneration of cervix one year after incomplete hysterectomy, and treatment was given to try to control excessive hemorrhage from the cervix. In this case, nodular growths could be felt in the inguinal region. Her treatment consisted in seven hours of *x*-ray through two anterior, two lateral, two posterior, and one perineal portal. This case was treated at the request of the family physician and the surgeon who had operated upon her. The result was that the hemorrhage was checked but never entirely controlled, and she said she felt much better. She died within six months after treatment. One of the fourteen fatalities, I feel sure, died of some intercurrent condition, for she was a type one of Schmidt's classifications, and died within a

year of treatment. I saw her a month before her death, and her condition was satisfactory at that time.

Twelve of the fatalities were of type three and four of Schmidt's classifications, and treatment was given them for palliation only. None of them survived a year. I am in doubt as to the proper course to pursue in this type of case. Hemorrhage was the symptom we tried to control in these patients, and in just about half of them there was benefit, while in five there was no apparent benefit at all; two were seemingly made worse by the treatment. However, two of these patients were bedridden from hemorrhage when treatment was given, and were made able to be up and feel good for six and nine months respectively before death.

Forty-eight of this group were diagnosed malignancy of the cervix, including all of Schmidt's classifications, except class four, into which class the above mentioned patients belonged. Two of this group have impressed me much as to the possibilities of radiotherapy in otherwise hopeless malignancy. Of these two patients, one Mrs. R, aged 53, came to us with a large ulcerating lesion, which had destroyed the left side of the cervix and extended beyond the junction of the vaginal mucosa with the cervix, and there was some fixation. She was examined by two surgeons, and both decreed her case inoperable. The pathological report of her condition was squamous cell carcinoma. She was given three applications of 1200 mg. hours each, of intra-uterine radium, 1500 mg. hours direct to the lesion by vaginal pack, covered with lead and dental modeling compound, making a total of 5100 mg. hours of radium, and in addition four hours of *x-ray* as before described. The result is that she is well and apparently free from any evidence of her neoplasm at this time, which is exactly five years from treatment.

The other patient here mentioned was a negro woman, T. J., who had a lesion identical with the above, but being practically a charity patient, no biopsy was made. In this case, great difficulty was experienced in placing the radium, for the side of the cervix was ulcerated, and the slightest attempt to dilate produced alarming hemorrhage. She was given two intra-uterine radium packs of 2400 mg. hours each, with 1200 mg. hours, to the cervix, and two hours *x-ray* from anterior portals,

and is well now, as far as examination can determine. Here five-year period will end in July, 1929.

One patient seen sixteen months ago has impressed me much as to the rapidity with which these lesions develop. Mrs. P, aged 46, a resident of Louisiana, was seen in October, 1927, by a very competent group of physicians, who referred her to their pathological department for biopsy, telling her that she probably had a malignancy, but that it had not developed sufficiently to be sure. Instead of going to the department to which she had been directed, she went home and consulted her husband. Together they decided that the possible motive for further examinations of her was to justify surgery they did not believe she needed. Consequently, she waited three months until January, 1928. At this time she saw another group of physicians and was told that she had an inoperable carcinoma of the cervix of type 3 of Broder's classifications, and that her only chance for life was radium. Being personally acquainted with us, she came to Lake Village, bringing these reports with her. Examination revealed the cervix ulcerated to such an extent as to practically destroy it. The characteristic feature of the ulceration was that it was linear in form, very much resembling fissure in ano. There was no fixation, and she was given 7200 mg. hours of radium intra-uterine and intravaginal, and two hours of *x-ray* anteriorly. She is in good condition at the end of 16 months, but, of course, this is too short a time to decide her future. This case is described merely to show how rapidly these lesions sometimes develop. I know the group who first examined her and know them to be competent physicians, so that I feel that the difference in their findings and the findings of the second group and ourselves was wholly due to the advance of the growth.

John G. Clark advocates cautery amputation of the cervix when the cervix is approachable, and surely I cannot criticise such an eminent authority. However, four of the cases in this series had had cervical cautery previous to radiation, and they gave more trouble than any I have seen. Two of these cases were in the hospital being packed to control hemorrhage from sloughs of cervical cautery, and radium was placed in the sloughs and the usual pack used behind it. They finally responded, but I am much impressed with the

seriousness of hemorrhage from this source, and strongly advise against cervical cauterization in women above 40 years of age, whose chief symptom is hemorrhage.

While we have but two cases which we can regard as five-year cures of malignancy, we have a goodly number whom we have every reason to believe we can report as cures after the five-year period has passed in their cases. I also feel that the cases described here are of interest, from many angles, and for this reason have described them in detail, and hope to benefit by the discussion of them by others.

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DISCUSSION

D. A. RHINEHART, Little Rock: This subject is far too important to let pass without discussion. Dr. Wilson has presented it in an admirable manner. He has excellent equipment; he has treated his patients in a masterful way, and his results are as good as those being obtained anywhere.

Radiation therapy, with radium, x-rays, or both, has a very definite place in the treatment of pathological conditions of the uterus. Carcinomata of the cervix are now treated almost exclusively in this manner. The results are better than were obtained with the Wertheim operation, without the high primary mortality of that operation. In recent years I have encountered only one patient that has had an operation for a cancer of the cervix. Since it metastasizes rather late, carcinoma of the body of the uterus usually can be treated better by surgical removal than by radiation.

Many non-malignant conditions of the uterus can also be treated with radiation. Small and medium-sized fibroid tumors of the uterus in women past the child-bearing period and menorrhagia at the time of the menopause without malignant change in the uterus are conditions that can be relieved in an unusually large percentage of cases. Four or five years ago before this Society I reported a series of ninety-six cases of this kind treated in this manner with only one unsatisfactory result. Since it is better to preserve the function of the ovary in younger women, and since large-sized fibroid tumors have a higher percentage of malignant change, when there are no contra-indications to surgery, these are the patients who do better if operated upon, either by doing a myomectomy or a subtotal hysterectomy.

I believe that surgeons and radiotherapists should be familiar with all phases of this subject, so that the treatment that offers the most to each patient will be the one recommended. Dr. Wilson has given us an excellent idea of the results that may be obtained in the treatment of some of these patients.

DR. F. H. KROCK, Fort Smith: I would like to stress the importance of biopsy in all cases of abnormal uterine bleeding. Today there is a growing tendency to place radiotherapy upon an empirical bases. A woman has abnormal uterine bleeding and immediately is referred to the radiologist for radium or x-ray treatment. Novak has repeatedly emphasized the importance of establishing an exact diagnosis by microscopical study of tissue removed from the uterus. It is impossible to differentiate between a hyperplasia of the endometrium and an early adenocarcinoma of the body by bimanual palpation or speculum examination. After curettage it is essential to have a competent pathologist to examine the curettings as one who isn't familiar with the morphology of the cyclic changes of the endometrium can easily confuse a premenstrual hypertrophy with adenocarcinoma. I have seen panhysterectomy performed after a diagnosis of carcinoma had been made from curettings and a normal uterus removed. Only by such a study can radiotherapy be placed on the scientific basis it deserves to have, and worthwhile statistics created.

DR. WILSON, in response: I appreciate the discussion by the two gentlemen who discussed the paper. In regard to the differentiation of these cases, that has been as carefully done as we could do it. I made a sub-division of the non-malignant conditions; those cases in which no lesion could be demonstrated and the only thing we could find would be hemorrhage. We have diagnosed those cases as functional hemorrhages. A number of these women have had repeated curettages. Four of them had myomectomies, one an incomplete hysterectomy, and four or five of them had cervical cauterization, which I am frankly afraid of because of the trouble I have had with it.

The doctor's statement as to biopsy is well taken because it is known that the type of growth of neoplasm that is more sensitive to radiation is the most resistant to surgery and vice versa. In other words, the ones that the surgeon can get the best results out of are the ones that are more resistant to radiation. That will apply to any group.

Broder's classification divides malignant neoplasms into four classes. In Class 1, 25 per cent of the cells only are malignant and 75 per cent are differentiated; Class 2, in which 50 per cent of the cells are malignant and 50 per cent differentiated; Class 3 in which 75 per cent of the cells are malignant, and that was the class that one of these patients was put in by a very competent pathologist in an adjoining State. That would tell us which case might do the best by surgery and which case might do best by radiotherapy, I believe.

We have only treated two cases that were adenocarcinomatous. Adenocarcinoma doesn't respond well to radiation. One of these was one of the fatalities reported here, who just neglected herself, and was treated for palliation. Another one I treated two years ago was sent out well and has since had to have radium implanted into a little lesion in the cervix. She was treated because her physical condition was such that she wasn't expected to stand a hysterectomy.

As to the size of these tumors, Dr. Stacey of the Mayo Clinic, about four or five years ago, in a resume of radiotherapy in uterine conditions stated that, all tumors of the fibroid group less in size than a four months pregnancy were treated by the Mayo group preferably by radium. Above that size, usually by surgery. But she further stated that all inoperable tumors regardless of size, those that were tied down by adhesions, fixed and almost unapproachable surgically, were treated by radiation, as well as were all tumors in which the physical condition of the patient contra-indicated surgery. And as to the selecting of these patients, a number of mine have been selected by the other fellow that didn't want them. That's unfortunately the case that often comes to the radiotherapist. You feel like they are pretty nearly using you as an ante-chamber for the undertaker.

BANTI'S DISEASE*

R. H. WILLETT, M. D., Jonesboro

In presenting this paper on Banti's disease and ease report, we claim nothing new in the treatment on in any etiological factors.

HISTORICAL

Banti in 1883 described a condition in which a cirrhosis with an enlarged spleen was noted. In 1894 he showed that Ascites was commonly found in the later stages and suggests through clinical and experimental evidence that the primary cause was in the spleen.

He was the first to suggest the removal of the spleen. The etiological factors are still in debate, the main difference of opinion being as to whether Banti's disease is due to a specific cause or is merely a fairly constant symptom complex. Banti, himself, attempted to demonstrate the microorganism in the blood and viscera, but he failed as well as many others to produce the disease in experimental animals.

Pearee claims that the spleen is involved earlier than the liver. This would point to a hematogenous rather than an interogenous toxin.

It is now the universal opinion, if the early removal of the spleen before the secondary changes have occurred in the liver, that a complete cure, or at least what amounts to a cure is obtained.

SYMPTOMATOLOGY

The condition starts in childhood, but does not make itself felt often until later, rarely

before the age of ten. The disease has occurred in more than one member of the family, but is not claimed to be hereditary in character. The symptoms may be classified into three stages. The first is represented by an enlarged spleen. This is usually discovered by accident, though occasionally there may have been a perisplenitis. During this stage the child or individual may complain of lassitude and weakness. The first stage may cover a period of several years. In and during the second stage of the disease it is usually recognized. Then the first symptom may be that of a hemorrhage most often bleeding from the esophageal varices and the gastric veins, which have been found markedly dilated even in the very early operation for the removal of the spleen. These hemorrhages are usually associated with more or less prominent gastrointestinal symptoms, especially so in children. At this stage, following the hemorrhage, the gastro-intestinal symptoms and the enlarged spleen, appears the secondary anemia.

The third stage is recognized by marked cirrhosis of the liver. Ascites is now apparent and during the second and third stages the blood changes take place. During the second stage the red blood cells are found diminishing, the count of the red cells varying from two to three million. Apparently, the hemoglobin is more affected than the number of red blood cells and may reach a low figure of thirty or forty per cent. The white cells are never increased in number, unless there is a secondary infection or after hemorrhage, and then only for a short period. The diminution in the number of white cells is one of the earliest and constant features of the disease.

DIFFERENTIAL DIAGNOSIS

Banti's disease must be differentiated from malaria, syphilis acquired and hereditary, amyloid enlargement of the spleen and liver, especially in chronic infections (osteomyelitis), intestinal parasitic infections with enlargement of the spleen, and Gaucher's disease.

TREATMENT

The treatment of this disease is the early removal of the spleen and is the only logical one, however, the splenectomy should never be done during a period of exacerbation. When reasons that splenectomy cannot be performed or not permitted, x-ray and radium may be used, which may favorably affect the

*Read before the 54th Annual Meeting of the Arkansas Medical Society, held at Hot Springs, May 7, 8, 9, 1929.

course of the disease, though doubtful as to whether or not it cures in the later stage. Where only palliative measures may be indicated, restricted activities, nourishing diet, combined with arsenic, especially to the point of tolerance, Fowler's solution, and the arsenamines may be tried.

Case Report No. 8914: Minor, aged 8. Entered hospital on January 23. Pulse of 140. Temperature 98. Face pale, showing the after effects of a hemorrhage.

X-ray of chest requested by referring physician. Findings: Slight congestion through the middle lobe of right lung. Left lung clear.

Family History: Both parents are living and in good health. One brother died at infancy. Two sisters died at infancy. Two sisters living and in good health.

Patient had usual diseases of childhood. No diphtheria or scarlet fever.

Chief Complaint: First, mother noticed at age of six months, that the child had an unusually large abdomen, but no other complaint until the age of five years, when he had a high fever for four or five days. This was followed by a rash on face and upper extremities. After this spell of illness, the abdomen was larger by a marked degree, then, approximately one year later, he had a vomiting spell and a large amount of blood was vomited. This lasted for three weeks, and the abdomen seemed more swollen and at this time it was noticed that the spleen was greatly enlarged. From the age of five up to the present time he has been in very poor health and, on January 15, he had influenza and was sick several days and on January 21, he had a severe gastric hemorrhage with apparently the loss of a pint or more of blood.

Physical Findings: Head, normal. Glands, all cervical glands involved. Epitrochlear: Negative. Chest: Few bronchial rales, otherwise negative. Heart and blood vessels: Heart sounds very feeble, no lesions. Pulse: Rapid and feeble. Abdomen: Distended. Spleen markedly enlarged, filling approximately half of the abdomen. No tenderness over the spleen was noticeable. Skin: Very pale, lemon tint. Hemorrhagic. The extremities are normal.

January 23, Blood Picture: White blood count, 17,200; Red blood count 4,000,000. Hemoglobin, 80 per cent. Poly. 83; Small lymphs 11; Large lymphs, 5; Eosins, 1

February 2, Blood Picture: White blood count, 10,000; Red blood count, 3,000,000; Hemoglobin, 60 per cent. Polys. 70; Small lymphs, 23; Large lymphs, 5; Eosins. 2; Wassermann: 2x.

February 26, Blood Picture: White blood count, 1,600; Red blood count, 1,400,000; Hemoglobin, 40 per cent; Polys. 46; Small lymphs, 50; Large lymphs, 2; Eosins, 2; Urine: Negative, except for many pus cells.

DISCUSSION

DR. D. E. White, El Dorado: What did you do with the patient, and what were the results in the case?

DR. WILLETT, in response: I think that is a good question. In this case we had to make a differential diagnosis to satisfy our minds as to any syphilitic condition. To prove our diagnosis, we checked both parents for negative Wassermann. During that period of time we put the child on anti-luetic treatment with apparently no results. After our negative Wassermann of both parents, then we hoped, as we brought out in the paper, that palliative treatment would do, and pushed the child on arsenic. I might say this child also had x-ray. If we can get the child up a surgical point, we will have the spleen removed. I thank you.

THE MEDICAL EXPERT WITNESS

O. M. BOURLAND, M. D., Van Buren

The medical witness, designated alienist, meaning strange, comes in for most of the adverse criticism aimed at the medical expert. The alienist, so frequently, gives what seems to the public, such strange testimony; and I may add, strange to the medical profession. This practically universal criticism might be correctly, or incorrectly, attributable to ignorance on the part of the critics.

But the spectacle of direct contradiction in the evidence presented by an equally formidable array of alienists, both for the prosecution and the defense, in our courts, has become so common that not only the medical men, but the laity, who read the daily papers, now regard such evidence as farcical. The practical workings of our present laws pertaining to this subject, seem to me consonant with the practical workings of another law; by which, when invoked for its original purpose, probably is to be commended; but is so frequently used in the perpetration of fraud that it has become a stench in the nostrils. I refer to the bankrupt law, through which, you, as well as myself, have many times been victimized.

The masses of the medical profession are chagrined at this condition of affairs; and unjustly are doomed to share the odium which attaches to this loss of faith in the integrity of alienists, by the public. The general practitioner is compelled to assume the roll of alienist or other medical expert. He is then an expert (full-fledged in all but the expert's fee). He may err, through lack of knowledge of the special branch of medicine, in which he is to be interrogated; the breadth of which, possibly, precluding his ability to more than scratch the surface. Or, he may be led into absurdities by the lawyers, with the proverbial hypothetical question which so frequently is full of snares and delusions.

As expressed by a writer on forensic medicine: "The hypothetical monstrosity is nothing but the defendant at the bar." The hypothetical question distorts the real issues, adding to, or subtracting from, the facts in the case; and mystifies parts when desired by the interrogator. As a protection against the lawyers' wiles, the medical witness should insist on his privilege of reading the propounded question, and thus be able to render an intelligent answer.

Pendantry, is, I feel, too prevalent in the giving of testimony by the medical expert. Frequently this technical language is utterly incomprehensible to the juror, and the juror's mind becomes so befuddled that he feels it his duty to ignore all the medical testimony introduced by both the prosecution and defense, in the final summing up of the evidence. For instance the expert in describing injuries sustained by a contestant states: "There was extensive extravasation of blood; and ecchymosis; with tumefaction in the facies and over the calvarium; and an acute hyperaesthetic condition, was elicited on palpating the structures involved in the traumatized pathologic process." Then the lawyer may befuddle things further, thus: "When you found this pathology did you, or did you not, incise sufficiently to obtain positive, optical, as well as, palpable, evidence that there was, or was not, a solution of continuity in the subjacent osseous tissue; and was there, or was there not, any meningeal hyperaemia or other involvement of the meninges or cerebral tissue?"

The fact that the expert is retained by a fee, must necessarily engender in him distinct bias and prejudice. The original purpose of expert testimony was to aid the jury on a tech-

nical subject. The present procedure defeats the original purpose of this testimony. And Chief Justice Chapman of the Massachusetts Supreme Court, gave it as his opinion that experts could be found to testify to any theory, no matter how absurd. He also said: "just as long as experts are hired by opposing sides, they will stand in the delicate relation of employer and employee."

To obtain an unbiased opinion from the mental expert, the State of Wisconsin has empowered judges to appoint these alienists to study the cases as long as necessary to arrive at a true conclusion. The judge being in position to know the qualifications and trustworthiness of those of the profession, who might be called to testify, is thus able to render the best service to the public. This procedure was adopted after unconscionable, so-called experts, had systematically furnished such evidence, by fabrication and trickery, as was desired by the lawyers in the case.

Fortunately for us these malefactors of both professions are probably not numerous. Dr. Leo V. Tipley of Denver, Colo., says: "To make alienists agree try every criminal as to whether he is, or is not, guilty of the crime. If guilty, punish him; and if there is any doubt about his sanity, let an impartial board of alienists, appointed by the court, decide. Let them study the man in the same scientific, and unbiased way that they study any other patient. Under such conditions they will study the defendant and the defendant only; and not a hypothetical individual. Then and only then will justice be done to the mentally ill, and alienists will agree."

The State Medical Society of Arizona has passed a resolution to have a committee to formulate a law regarding experts: That it be the judges duty to appoint three experts when needed in a case; and that the court pay for such services; and that the contestant losing the decision would incur this expense: This, it seems to me, should supplant the old one in which each contestant employed his own experts, which fact supplies the implication of a farcical trial; and, upon which fixed ridicule has so long perched.

Expert testimony has been declared by the United States Supreme Court, to be the weakest and most unreliable of all evidence, so that it may be accepted or disregarded by jurors, at their pleasure. All experts look alike to a juror. The expert who says that he knows

not what an Argyll-Robinson pupil, or a Romberg is; or states that the esophagus passes through the foramen magnum; or, who identifies the Sacro-Iliac synchondroses, as two symmetrical fractures of the pelvis; or, that the highly arched palate of an accused murderer, by pressure on the base of the brain, produced imbecility; or, that slight injury of the head, by lowering the vitality of a woman, had led to cancer of the stomach; he, of this ilk, is rated by the juror with our best medical men. Dr. Stevenson of St. Paul vouches for the truth of these statements and many others equally absurd. This sort of evidence is suggestive of assertions so frequently heard, of late, from our so-called spine adjusters.

When such absurdities have actually been accepted as evidence in our courts, should anybody be surprised at any character of testimony, which may be introduced, as trustworthy? The counsel of the Royal Institute of Public Health contemplates taking action toward the establishment of education in medical jurisprudence; which will be of the greatest advantage to the lawyers, medical men, as well as the judges. The idea of the appointment of a commission to pass upon the question of insanity, favored by many, should be considered with scrutiny; as the personnel of the commissions might, through political preferment, sink far below the level in character and efficiency, contemplated by its advocates.

Dr. Lloyd of Philadelphia says: "We have so many commissions, that we are in danger of becoming a government by commissions. It is now proposed to extend this method to the courts; or something like unto the courts, for the courts too, are the objects of radical reconstruction. But before we lend ourselves to the advocacy of any such substitute for the old fashioned trial by jury, we should stop, look and listen. The system of trial is the result of a long process of evolution; and reflects the wisdom of ages. It is its abuse in this country, and not its inherent defects, that calls for remedy. Reform the experts and not the courts."

There is much food for thought in Dr. Lloyd's preachment. In our zeal to remedy

a very patent evil in our jurisprudence, we must not rush into greater ones, through inadequate preparedness for the task at hand. The legal profession has been held responsible, by some writers, for the present unsatisfactory condition. Many distinguished members of this profession, however, are eager to co-operate with the medical profession; and the castigation is probably unwarranted. This criticism calls to mind the stanza by Moore:

"Since sway of lawyers first began,
Man has forgot to feel for man;
The pulse of social life is dead,
And all its finer feelings fled."

Many medical men advance the view that no insane person should be held criminally responsible—and at the same time, some definitions of insanity would lead to the belief that no man is really sane. Acceptance of both of these extreme views would lead to complete negation of criminal justice. This state of affairs, perturbs the public and leaves, with them, the question in a state of chaos.

To the end that the best solution of the question may be had by our profession, each county society in each State should contribute its quota to the sum total of discussion of the matter; and the State Societies' representatives should co-operate with the American Medical Association's representatives with authority to designate representatives whose duty would be to confer with the American Bar Association's representatives, for the purpose of framing satisfactory reforms. It is by no means a problem of easy solution. This should be impressed upon the entire membership—some one hundred thousand in number; a great potential power.

The recent action of the physicians of Missouri, in severely criticising one of their members, and removing him from fellowship, seems to me, a very wholesome contribution. This physician had established a reputation of lending his talent and tact to the contestant, be he prosecutor or defendant, who most interested him. The publicity attached to the action of the medical men of Missouri, in their castigation of this offender, will have a wholesome effect, and should be emulated by the entire statehood of this broad land of ours.

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Editorials

OUR ANNUAL MEETING

The annual meeting of the Arkansas Medical Society will be held at Fort Smith, May 6, 7 and 8. In this issue will be found the preliminary program, presenting a number of scientific papers and announcing several motion pictures. These pictures we have described in the March issue of *THE JOURNAL* at some length and that description should suffice to convince members that they offer a display (for the first time in Arkansas) of actual operations reproduced on the screen—a display that they scarcely can afford to miss and which should appeal to every member who wishes to keep abreast of the up-to-date method in the practice of medicine.

A change has been made in the entertainment program announced in last month's issue, a change which will be hailed with pleasure by every member. Instead of a dinner with amusement features for which tickets were to be sold, there will be a buffet supper on the evening of the second day, May 7, at the Goldman Hotel. Now for the big surprise! There will be no charge, no need for tickets and not only our members but the families of every member and visitor are invited to attend, enjoy the good refreshments and an entertainment with vaudeville stunts, music, dancing and bridge. The program offers entertainment to suit all tastes and the wonderful supper and show is put on by the liberality and hospitality of the physicians of Sebastian County. Such being the case, every member can scarcely do otherwise than, foregoing any other plans for that evening, enjoy this grand cabaret supper.

The program of the Woman's Auxiliary will also be found in this issue of *THE JOURNAL* and it is hoped there will be a large attendance. These ladies also are invited to the buffet supper.

“The health department can help the doctor increase his legitimate private practice through its program in diphtheria immunization, for instance,” declares Dr. Shirley W. Wynne, New York City's Commissioner of Health. “But the doctor must remember that once a health department embarks upon a program to encourage people to go to a private practitioner he must do his part to keep that patient by his professional competence, moderate charges and effective follow-up work.”

Abstract

THE SURGEON IN THE MAKING

Lucius E. Burch, Nashville, Tenn. (Journal A. M. A., March 15, 1930), asserts that the essential to be desired in the training of the young surgeon is surgical judgment. He discusses the economic difficulty of acquiring a thorough training and the best method of securing the proper training after graduation. He presents a plan that he is about to inaugurate in his own service which is as follows: After graduation a one year service in medicine should be required in every good hospital. No one can become a good surgeon unless he has received medical training, and nothing will be of greater service to him in his future life than this year in medicine. A second year of training should be spent in the department of pathology. Here the young surgeon will refresh his anatomy; the postmortems will teach him that disease often involves many organs and this, of course, will broaden his vision. This year will also give him an added stimulus for appreciating the scientific side of surgery. The third, fourth and fifth years are to be spent in the wards, laboratories and operating rooms of the department in which the student desires to specialize. This training should produce a man of broad vision and of scientific attainments, a good physician, a promising pathologist, well versed in technique, and, last, but not least, one well developed in surgical judgment.

Personal and News Items

Dr. W. M. Branch has moved from Lead Hill to Springdale, Arkansas.

Dr. W. E. Jones of Morrilton has moved to Seminole, Oklahoma.

Dr. M. J. Barlow of North Little Rock has returned from Rochester, Minn.

Dr. A. G. Emerson has moved from New Edinburg to Bradford.

The First Councilor District and Northeast Arkansas Medical Society held their spring meeting April 8, at Blytheville. Presided by Dr. A. G. Henderson of Jonesboro, president.

The twenty-sixth annual meeting of the National Tuberculosis Association will be held at the Hotel Peabody, Memphis, Tenn., May 7, 8, 9, 1930. Dr. Linsly R. Williams of New York presiding.

Dr. L. D. Duncan of Waldron was elected President of the State Board of Health at a recent meeting of the Board. Dr. R. M. Eubanks of Little Rock was elected Vice-President.

The Lincoln County Medical Society elected the following officers for 1930. President, G. W. Ringgold, Gould; Vice President, C. W. Dixon, Gould; Secretary, A. C. Thiolliere, Gould; Delegate to the State meeting, C. W. Dixon, and Alternate, G. C. Wood, Grady.

Dr. Morgan Smith of Little Rock has been elected member of the Pulaski County Board of Education. Dr. Smith's friends are also glad to learn that he is a candidate for the Democratic nomination for lieutenant governor.

The Garland County-Hot Springs Medical Society held its annual dinner at the Kingsway Hotel, April 8, 1930. Dr. Geo. B. Fletcher, president, presided. Dr. F. Vinsonhale of Little Rock was the principal speaker of the evening.

Officers for Woodruff County Medical Society for this year are: President, J. H. West, Grays; Vice-President, R. L. Frazer, McCrory; Secretary-Treasurer, L. E. Biles, Delegate to meeting of State Society, J. F. Hays, McCrory; Alternate, F. C. Maguire, Augusta.

The Columbia County Medical Society met at Magnolia, February 25, and elected the following officers: President, C. T. McWilliams, Magnolia; Vice-President, E. T. Hudnall, Taylor; Secretary-Treasurer, W. H. Horn, Taylor. T. H. Jones of Magnolia, delegate to the State Meeting, and T. S. Jordan of Taylor as alternate.

On the program of the Centennial Celebration of the Tennessee State Medical Association held in Nashville, April 8, 9, 10, 1930, Drs. W. F. Smith and D. A. Rhinehart of Little Rock presented the following papers: "Inguinal Hernia" by Dr. Smith and "An x-Ray Demonstration of Colles' Fracture and Other Injuries of the Forearm and Hand" by Dr. Rhinehart.

Dr. H. J. Cooper, Assistant Medical Department, Aeronautics Branch, U. S. Department of Commerce, Washington, will visit the Arkansas Medical Society meeting May 6, for the purpose of holding a conference with medical examiners for the department. All medical examiners are urged to attend this meeting. The time and place of this meeting will be found on the bulletin board at the Goldman Hotel.

Beginning this year the American Association for the Study of Goiter will award a cash prize of \$300.00 annually for the best original thesis dealing with some phase of the goiter problem. Thesis should be submitted by June 1, to Doctor Walter M. Simpson, Chairman of the Essay Committee, Miami Valley Hospital, Dayton, Ohio.

The award will be given immediately following the coming meeting of the Association which is to be held in Seattle, Washington, July 10-12, 1930.

Regional Conference of the American Social Hygiene Association, under the auspices of the Louisiana State Board of Health and the New Orleans Council of Social Agencies, at the Hotel Roosevelt, New Orleans, May 26-27. Institutes will be held on Friday and Saturday (May 23-24). Public meeting Sunday. Speakers from most of the southern and southwestern States will take part in the program, as well as several representatives from the national society. The meeting should prove of great interest to physicians, public health workers, social service workers and members of parent-teachers organizations.

The annual meeting of the Arkansas Tuberculosis Association will be held at the Marion Hotel, Little Rock, May 5th and 6th, and will bring to the State several figures of international note in the tuberculosis fight. Among these is Dr. Theobald Smith, holder of the Trudeau medal and famed for his original work; Dr. Linsley Williams, President of the National Tuberculosis Association, managing director of the New York Academy of Medicine, and director of the Rockefeller work in France during the World War, and Dr. William Charles White of Washington, Chairman of the Research Committee of the National Association. Dr. Smith will speak on Tuesday afternoon on the "Relation of Undulant Fever to Public Health," Dr. Williams and Dr. White will speak at the annual dinner on Monday evening, May 5th, the former on "Childhood Tuberculosis," the latter on "The Research work of the National Association." Dr. M. F. Haygood, of Nashville, who is directing the tuberculosis program for the State Board of Health of Tennessee, will discuss the progress of the campaign in that State on Monday afternoon. An invitation is extended to all physicians to be present at all sessions.

AUXILIARY NEWS NOTES

The January program which was very unique in every detail, and especially interesting to the elder members of Miller County Auxil-

iary, was held at the home of Mrs. Albert Mann, with Mrs. J. T. Robinson, Mrs. C. E. Kitchens and Mrs. J. N. White as co-hostesses.

The subject being "The Historical Program," Mrs. S. A. Collom, Mrs. J. R. Dale, and Mrs. A. B. Loach taking part. Portraits of the pioneer doctors were passed and the History of their arrival was given.

Garland County Auxiliary is doing the greatest work and showing the greatest interest in its history. In the beginning of the year's work, attractive year books were made with good programs outlined. The attendance has been unusually good. They have sponsored the P. T. A. in holding School Clinics attempting to see that every child in school be examined; have bought a fifty dollar bond given for Tuberculosis Christmas Seal sales and are working hard to make a generous donation to the Student Loan Fund.

Sebastian County Auxiliary has held regular meetings and is doing good work. March the 10th a meeting was held, most of the time being taken up with plans for the State Meeting to be held in Fort Smith in May. Their plans being to make this the most successful meeting Arkansas has ever had. Full plans will be given out in the near future. Fort Smith always does what she sets out to do.

PHYSICIAN WANTED—An unusual opportunity for a physician in a good inland town near Little Rock. To take the place of an old doctor, who wishes to retire. Write R. E. Kent, 106 N. Watkins Street, Conway.

CORRESPONDENCE

Dr. Wm. R. Bathurst, Secretary,
Arkansas Medical Society,
Boyle Building,
Little Rock, Arkansas.
Dear Doctor Bathurst:

This is to inform you that Dr. J. M. Fleming of Mount Vernon, Texas, is the regularly appointed Fraternal Delegate from the State Medical Association of Texas to the Arkansas Medical Society. It is my understanding that Dr. Fleming will attend your meeting.

Dr. Fleming has been directed to assure your splendid organization of the sympathy and best wishes of the medical profession of Texas, and I am sure that personally I wish you a most delightful meeting. Our president, Dr. D. J. Jenkins of Daingerfield, has directed Dr. Fleming to extend his official and personal greetings and felicitations.

Fraternally yours,

HOLMAN TAYLOR,

Secretary.

Announcements and Program

FIFTY-FIFTH ANNUAL SESSION

of the

Arkansas Medical Society

FORT SMITH

MAY 6, 7, 8, 1930

OFFICERS

President—Thad Cothorn, Jonesboro.

President-Elect—E. E. Barlow, Dermott.

First Vice-President—Geo. B. Fletcher, Hot Springs.

Second Vice-President—B. H. Hawkins, Mena.

Third Vice-President—J. G. Gladden, Western Grove.

Treasurer—R. J. Calcote, Little Rock.

Secretary—Wm. R. Bathurst, Little Rock.

COUNCILORS AND COUNCILOR DISTRICTS

First District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties. Councilor, W. W. Verser, Harrisburg. Term of office expires 1931.

Second District—Cleburne, Fulton, Independence, Izard, Jackson, Sharp and White Counties. Councilor L. T. Evans, Batesville. Term of office expires 1930.

Third District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff Counties. Councilor, M. C. John, Stuttgart. Term of Office expires 1931.

Fourth District—Ashley, Bradley, Chicot, Cleveland, Drew, Desha, Jefferson and Lincoln Counties. Councilor, W. T. Lowe, Pine Bluff. Term of office expires 1930.

Fifth District—Calhoun, Columbia, Dallas, LaFayette, Ouachita and Union Counties. Councilor, L. L. Purifoy, El Dorado. Term of office expires 1931.

Sixth District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier Counties. Councilor, C. A. Archer, DeQueen. Term of office expires 1930.

Seventh District—Clark, Garland, Grant, Hot Spring, Montgomery, Saline and Scott Counties. Councilor, Dewell Gann, Sr., Benton. Term of office expires 1931.

Eighth District—Conway, Faulkner, Johnson, Perry, Pope, Pulaski and Yell Counties. Councilor, Anderson Watkins, Little Rock. Term of office expires 1930.

Ninth District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren Counties. Councilor, W. H. Poynor, Harrison. Term of office expires 1931.

Tenth District—Benton, Crawford, Franklin, Logan, Madison, Sebastian and Washington Counties. Councilor S. J. Wolfermann, Fort Smith. Term of office expires 1930.

Delegates to the A. M. A.—William R. Bathurst, Little Rock (1931); Homer Scott, Little Rock (1930).

COMMITTEES

SCIENTIFIC PROGRAM

R. J. Calcote, Little Rock, Chairman; D. W. Goldstein, Fort Smith; Geo. B. Fletcher, Hot Springs; H. T. Smith, McGehee; Wm. R. Bathurst, Little Rock.

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Fort Smith, Chairman; Herbert Moulton, Fort Smith; Chas. E. Oates, Little Rock; H. E. Longino, Texarkana; E. D. McKnight, Brinkley.

MEDICAL LEGISLATION

M. L. Norwood, Lockesburg; F. Vinsonhaler, Little Rock; W. M. Majors, Paragould; C. S. Holt, Fort Smith; S. W. Douglass, Eudora; E. E. Barlow, Dermott.

STUDENT LOAN FUND

E. F. Ellis, Fayetteville, Chairman; G. A. Warren, Black Rock; Morgan Smith, Little Rock; R. H. T. Mann, Texarkana; Wm. R. Bathurst, Little Rock.

NECROLOGY

W. M. Gibson, Nashville, Chairman; J. M. Lemons, Pine Bluff; D. C. Walt, Little Rock; J. O. Rush, Forrest City; Flem D. Smith, Blytheville.

PUBLICITY

S. F. Hoge, Little Rock, Chairman; O. H. King, Hot Springs; W. P. Cooksey, Magnolia; J. T. Palmer, Pine Bluff; Thomas Douglass, Ozark.

CANCER CONTROL

Dewell Gann, Jr., Little Rock, Chairman; J. C. Hughes, Hoxie; Don Smith, Hope; Earle Hunt, Clarksville; J. S. Wilson, Lake Village.

INFANT WELFARE

A. C. Kirby, Little Rock, Chairman; J. S. Jenkins, Pine Bluff; H. H. Niehuss, El Dorado; H. A. Ross, Arkadelphia; E. J. Horner, Jonesboro.

HOSPITALS

J. W. Walker, Fayetteville, Chairman; Homer A. Higgins, Little Rock; L. M. Lile, Hope; P. W. Lutterloh, Jonesboro; O. J. T. Johnston, Batesville.

OUR PRESIDENT

OFFICIAL CALL



To the Officers, Delegates, Committeemen and Members of the Arkansas Medical Society:

GREETING:

The Fifty-fifth Annual Session will be held at Fort Smith, in the Knights of Columbus Convention Hall, Tuesday, Wednesday and Thursday, May Sixth, Seventh and Eighth, Nineteen Hundred and Thirty.

The House of Delegates will convene at 9:30 a. m., Tuesday, May 6th.

The Clinical Session will open at 1:30 p. m., and the General Session will be at 7:30 p. m. and consequently, according to the program.

THAD COTHERN,
President.

WM. R. BATHURST,
Secretary.



THAD COTHERN, Jonesboro

OUR GUESTS

M. Edward Davis, Chicago
Lewis J. Moorman, Oklahoma City
R. F. Lischer, Mascoutah, Illinois
Edward H. Skinner, Kansas City.
Ernest Sachs, St. Louis

OUTLINE OF THE SESSION

Tuesday, May 6th

Morning: Registration, 8:00 a. m.
Meeting of the House of Delegates, 9:30 a. m.
Noon: Meeting of the Council, with luncheon in the private dining room, Goldman Hotel.
Afternoon: Clinical Session, 1:30 p. m.
Evening: General Session, 7:30 p. m.

Wednesday, May 7th

8:30- 9:30 a. m.—Memorial Session.
10:00-12:00 a. m.—Scientific Session.
Noon: Meeting of the Council—Luncheon.
1:30- 5:30 p. m.—Scientific Session.
7:30-12:00 p. m.—Buffet Supper, Entertainment.

Thursday, May 8th

8:30-12:00 a. m.—Scientific Session.
Noon: Meeting of the Council—Luncheon.
1:30- 2:30 p. m.—Final Meeting of the House of Delegates.
2:30- 3:30 p. m.—Final General Session.
3:30- 4:00 p. m.—Meeting of the Council.

ANNOUNCEMENTS

REGISTRATION

The registration desk will be located in the Goldman Hotel and open from 8:00 a. m. to 6:00 p. m.

The delegates are requested to register as early as possible, so that the official roll of the House may be made up and that the House of Delegates may proceed with its business, beginning promptly at 9:30 a. m. Members and visiting ladies are also requested to register and receive the official badge and program.

The members of the Woman's Auxiliary will also please register and receive a program and the official badge of their organization.

All meetings of the House of Delegates, Memorial Session, and Scientific Sessions will be held at the Knights of Columbus Hall, 13th and B Streets, two blocks from the Goldman Hotel.

MEETING OF THE COUNCIL

The Council of the Arkansas Medical Society will meet at noon with luncheon in the private dining room, Goldman Hotel, immediately following the adjournment of the morning sessions.

Each Councilor will make a report of the condition within his district. Audit the report of their findings of the report of the secretary and treasurer, as well as make recommendations to the House of Delegates for appropriations of funds for the coming year.

COMMERCIAL EXHIBIT

W. R. Brooksher, Jr., Chairman

A number of high-class commercial exhibits will be on display in the Goldman Hotel, near the place of registration, and our members are urged to visit this interesting exhibit of books, instruments, office equipment and products of many manufacturing plants.

The Exhibit will include the following:

General Electric X-Ray Corporation, Chicago, Ill.
Dick X-Ray Company, St. Louis, Mo.
A. S. Aloe Company, St. Louis, Mo.
Fayetteville Machine and Tool Company, Fayetteville, Ark.

E. R. Squibb & Company, New York, N. Y.
J. A. Majors & Company, New Orleans, La.
Campbell Diagnostic Light Company, Chicago, Ill.
Petrolagar Laboratories, Chicago, Ill.
Harrower Laboratory, Glendale, Calif.
Little Rock Surgical Company, Little Rock, Ark.

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Chairman

The Scientific Exhibit will be displayed in the Goldman Hotel, conveniently accessible to those in attendance.

Among the exhibits will include:

Children's Bureau—U. S. Department of Labor.
American Association of Hospital Social Workers.
National Board of Medical Examiners.
American Heart Association.
American Federation of Organizations for the Hard-of-Hearing.
American Society for the Control of Cancer.
U. S. Department of Agriculture—Tuberculosis Eradication in Cattle.
Bureau of Mines—Mine Rescue Truck.

TO VISITING PHYSICIANS

The Arkansas Medical Society always welcomes visitors at the Annual meeting. We have assurance that there will be a considerable number of visitors at this meeting from Oklahoma and Missouri, and we want you to enjoy the meeting. Every member of the Se-

bastian County Medical Society is a member of the Reception Committee, and will have appropriate badges. If you want any information ask any member of this big committee. We hope that you will enjoy this meeting and will meet with us again.

GOLF—COUNTRY CLUB

M. E. Foster, Chairman

The local golf committee headed by Dr. Foster have arranged with the Country Club for the use of their eighteen-hole golf course for all members and visitors during the session.

Those wishing to play are requested to sign up when they register.

The Dewell Gann, Jr., Silver Cup will be the prize for the high score.

CIVIC CLUBS

The following civic clubs will meet during the session and have extended a cordial invitation to the visiting members of these respective clubs who attend the State Medical Convention:

Tuesday Noon—Lions Club, 12:15.

Wednesday Noon—Rotary Club, 12:10.

Thursday Noon—Kiwanis and Civitan Clubs, 12:10.

LOCAL COMMITTEES

Host: Sebastian County Medical Society.

Registration—W. G. Eberle, Chairman.

Entertainment—J. A. Foltz, Chairman.

Golf—M. E. Foster, Chairman.

Badges—I. F. Jones, Chairman.

Commercial Exhibits—W. R. Brooksher, Jr., Chairman.

ENTERTAINMENT

Wednesday, May 7, 8:00 P. M.

Goldman Hotel

BUFFET SUPPER (no tickets; no charge.)

Everyone is invited to attend this feature, compliments of the Sebastian County Medical Society.

Vaudeville. Music. Dancing. Cards.

HOUSE OF DELEGATES

First Meeting—Knights of Columbus Convention Hall
May 6, 9:30 A. M.

Calling roll of Delegates.

Meeting called to order by Thad Cothorn, President.

Appointment of Credentials Committee and their report.

Introduction of Fraternal Delegates—J. M. Fleming, Mount Vernon, Texas.

Adoption of the Minutes of the Fifty-Fourth Annual Meeting as published in the July, 1929, issue of the Journal of the Arkansas Medical Society.

Appointment of Reference Committee.

President's Address to the House of Delegates.

REPORT OF COMMITTEES

Scientific Program—R. J. Calcote, Chairman.

Scientific Exhibit—W. R. Brooksher, Jr., Chairman.

Medical Legislation—M. L. Norwood, Chairman.

Report of our Legal Advisor—Hon. Peter A. Deisch, Helena.

Necrology—W. M. Gibson, Chairman.

Publicity—S. F. Hoge, Chairman.

Cancer Control—Dewell Gann, Jr., Chairman.

Infant Welfare—A. C. Kirby, Chairman.

Hospitals—J. W. Walker, Chairman.

Student Loan Fund—E. F. Ellis, Chairman.

Entertainment—J. A. Foltz, Chairman.

Report of the Council—Dewell Gann, Sr., Chairman.

Report of the State Board of Medical Examiners—S. J. Allbright, Chairman.

Report of the Delegates to the A. M. A.

Report of the Secretary.

Report of the Treasurer.

New Business.

Selection of the Nominating Committee.

Proposed change in the Constitution and By-Laws to be voted on at the Fort Smith meeting:

RESOLVED, That the Constitution and By-Laws be amended raising the annual dues from three to five dollars.

THEREFORE, The following change be made in Article XI, fifth line, to read "The sum of \$5.00 per capita per annum."

CLINICAL SESSION

Knights of Columbus Convention Hall

Tuesday, May 6, 1:30 P. M.

"The Late Toxemias of Pregnancy"—Motion Pictures—M. Edward Davis, Chicago.

Abstract: The discussion of the late toxemias of pregnancy, including eclampsia, diagnosis, pathology, prognosis and present-day treatment as practiced at the Chicago Lying-in Hospital.

"The More Recent Therapeutic Measures Employed in the Treatment of Tuberculosis"—Lewis J. Moorman, Oklahoma City.

Abstract: (1) A brief reference to the routine rest, hygienic and dietetic treatment. (2) Nature's attempt to bring about local rest. (3) The non-surgical methods employed with a view of favoring local rest. (4) Artificial pneumothorax. (5) Phrenic nerve operations. (6) Thoracoplasty. (7) Certain combinations of the above methods. (8) Lantern slides illustrating results. (9) Conclusions.

"The Present Knowledge of Pellagra"—Lantern Slides—Harvey S. Thatcher, Dept. of Pathology, University of Arkansas, School of Medicine, Little Rock.

"Irritability of the Alimentary Canal and Treatment"—B. A. Rhinehart, Little Rock.

"The Toxins and Antitoxins of Erysipelas, Scarlet Fever and Diphtheria"—G. A. Hebert, Hot Springs.

"The General Practitioner and the Diagnosis of Early Tuberculosis"—J. D. Riley, State Sanatorium.

"Some Facts Concerning the Care of New-Born Which Deserve Serious Consideration"—G. D. Murphy, El Dorado.

GENERAL SESSION

Knights of Columbus Convention Hall

Tuesday, May 6, 8:00 P. M.

Calling the Society to Order — Thad Cothorn, President.

Invocation—Reverend Dana Dawson, Fort Smith.

Address of Welcome for Fort Smith—Mr. George Carney, President of the Chamber of Commerce.

Address of Welcome for the Sebastian County Medical Society—J. H. Buckley, President Sebastian County Medical Society.

Response to the Address of Welcome on Behalf of the Arkansas Medical Society—Morgan Smith, Little Rock.

President's Annual Address—Thad Cothorn, Jonesboro.

"The Country Doctor of Yesterday and Today"—R. F. Lischer, Mascoutah, Illinois.

Moving Pictures—"This Great Peril"—Shown by courtesy of Dr. Dewell Gann, Jr., Little Rock, Chairman, Committee on Cancer Control.

Synopsis: This picture was produced for the American Society for the Control of Cancer, Inc., to instruct the public in the proper method of coping with the cancer menace and to guard the public against quack practices. It is a story of a young physician who gave up a lucrative practice at great sacrifice to specialize in cancer, and thereby shatters a romance and breaks an engagement. Later the great skill and knowledge he has acquired is the means of saving the life of the girl's mother and thereby revives the romance.

MEMORIAL SESSION

Knights of Columbus Convention Hall

Wednesday, May 7, 8:30 to 9:30 A. M.

Conducted by the Committee on Necrology—W. M. Gibson, Nashville, Chairman; J. M. Lemons, Pine Bluff; D. C. Walt, Little Rock; J. O. Rush, Forrest City; Flem D. Smith, Blytheville.

Invocation—Reverend B. V. Ferguson, Fort Smith.

Address—Frank Vinsonhaler, Little Rock.

Music.

Benediction.

DECEASED MEMBERS

Gracey Waddell, Jonesboro, January 12, 1929.

William Wesley Ireland, Gentry, June 17, 1929.

Andrew Meek Mayfield, El Dorado, August 20, 1929.

George Franklin Hynes, Fort Smith, September 17, 1929.

Edward C. Pyatt, Pine Bluff, November 2, 1929.

Wiley B. Barner, Wynne, November 4, 1929.

Benjamin F. Walker, Jonesboro, November 15, 1929.

Add A. Evans, Bald Knob, November 29, 1929.

William W. Thrower, El Dorado, November 30, 1929.

John Stewart, Booneville, January 3, 1930.

James Thomas Jelks, Hot Springs, January 5, 1930.

Adam Robert Bradley, Morrilton, January 6, 1930.

Forrest Albert Corn, Lonoke, January 28, 1930.

Charles Hastings Cargile, Texarkana, February 13, 1930.

Fred Thomas Murphy, Brinkley, February 17, 1930.

St. Cloud Cooper, Fort Smith, March 22, 1930.

Edward Meek, Little Rock, April 10, 1930.

SCIENTIFIC SESSION

Knights of Columbus Convention Hall

Wednesday, May 7, 10:00 A. M.

"A Pen Picture of the Country Doctor" (For Men Only)—R. F. Lischer, Mascoutah, Illinois.

Moving Pictures—"The Technic of Blood Transfusion."

NOTE: This two-reel film was produced by Eastman Teaching Films, Inc., and photographed at the University of Rochester School of Medicine and Dentistry. It deals solely with technic, without any consideration of the indications for, and results of, transfusion. Only one method of grouping and one of direct and indirect transfusions are shown. The necessity for care in blood matching is emphasized and each step in the technic, from obtaining of blood from donor and recipient to grouping and cross agglutination, is clearly shown by actual photograph. The second reel shows the technic of actual transfusion.

"Progress in Ophthalmology"—R. J. Calcote, Little Rock.

"Indications For and Against Tonsilectomy with Substitute for Operation in Certain Cases"—H. J. G. Koobs, Rogers.

"Streptococcus Infection of Tonsils; Two Cases with Unusual Course and Termination"—B. H. Hawkins, Mena.

"Acrodynia with Case Report"—Allen A. Gilbert, Fayetteville.

AFTERNOON SESSION

Wednesday, May 7, 1:30 P. M.

"What Has Radium to Offer the Medical Profession and Why"—Edward H. Skinner, Kansas City.

Abstract: Brief summary of the world interest in cancer and the growing confidence in surgical radiation. Necessity of co-operative efforts by surgeons, radiologist and pathologist. Cancer diagnosis and therapy. Specific consideration of selective radiotherapy and carcinoma of the cervix, tongue, mouth, tonsils and other favorable situations.

Moving Pictures—Canti-Film on Cancer. Two reels—Shown by courtesy of Dewell Gann, Jr., Little Rock, Chairman, Cancer Control Committee.

"Spinal Anesthesia"—D. E. White, El Dorado.

"Diagnosis and Treatment of Osteomyelitis"—Lantern slides—F. Walter Carruthers, Little Rock.

"Fractures of the Pelvis"—Lantern Slides—W. R. Brooksher, Jr., Fort Smith.

"The Roentgen-ray Diagnosis of Urologic Conditions"—H. King Wade and H. Clay Chenault, Hot Springs.

"Some of the Unsolved Problems of Syphilis"—Lloyd O. Thompson, Hot Springs.

"Treatment of the Arythmias"—A. G. Sullivan, Hot Springs.

"Mental Changes in the Course of Medical and Surgical Diseases"—E. T. Ponder, Little Rock.

"The Thermal Baths in the Treatment of Syphilis"—E. A. Purdum, Hot Springs.

EVENING SESSIONS

7:30 P. M.—Buffet Supper—Goldman Hotel.

SCIENTIFIC SESSION—Continued

Knights of Columbus Convention Hall

Thursday, May 8, 8:30 A. M.

Motion Pictures—"Diagnosis and Treatment of Infections of the Hand." Three Reels.

Note: This film was produced by Eastman Films Inc., under the supervision of Dr. Allen B. Kanavel, Philadelphia, and based on his book, "Infections of the Hand." The subject is introduced by a consideration of the anatomy of the hand and with this as a basis the pathological aspects are presented in detail. The various diagnostic points are reviewed, and the dangers of neglect and tardy treatment are emphasized by a graphic presentation of complications to be expected in such cases. The usual sequence is followed by the therapeutic and operative considerations, but no actual operative technic is shown. The principles of post-operative treatment are duly stressed.

"Spinal Cord Tumors and Other Focal Spinal Lesions"—Ernest Sachs, St. Louis.

Abstract: The question frequently arises of whether a focal spinal lesion is due to a tumor or not. The differential diagnosis depends on a careful analysis of both history and the physical findings. At times in spite of all methods of examination, the differentiation cannot be made. The various available methods will be discussed.

"Wood's Modification of the Hodgen Splint, with Myodermic Traction Appliance"—H. D. Wood, Fayetteville.

"Sub-Diaphragmatic Abscess"—H. W. Hundling, Little Rock.

"The Treatment of Bone Infections by the Method of Leopold Ollier" (A French surgeon). Lantern Slides—Albert DeGroat, Fayetteville.

"A Plea for the Crippled Children of Arkansas"—Mr. Gustave Jones, Newport, President, Arkansas Crippled Children's Commission.

"Treatment of Cystocele with Special Reference to the Watkins' Interposition Operation." Lantern Slides—F. H. Krock, Fort Smith.

"Infant Feeding"—J. W. Fleming, Jr., Smackover.

"X-Ray Therapy." Lantern Slides—J. D. Southard, Fort Smith.

FINAL MEETING OF THE HOUSE OF DELEGATES

Knights of Columbus Convention Hall

Thursday, May 8, 1:30 P. M.

Roll Call.

Report of the Nominating Committee.

Election of Officers.

President-Elect, First Vice-President, Second Vice-President, Third Vice-President, Secretary, Treasurer, Five Councilors and one delegate to the A. M. A.

Report of Committees.

Further New Business.

Adjournment.

FINAL GENERAL SESSION

(Thursday afternoon, May 8, immediately after adjournment of the House of Delegates).

Calling meeting to order—Thad Cothorn, President. Unfinished Business.

Report of the Reference Committee.

Presentation of President and President-Elect.

New Business.

Selection of Place for Next Meeting.

Adjournment.

ARKANSAS MEDICAL SOCIETY

(Early History)

The first medical society in Arkansas was the one organized by Dr. James A. Dibrell and the army surgeons at Fort Smith about 1845. Following it, some attempts were made to organize local medical societies in several counties, but none of these early societies was long-lived.

Probably the most important of these early organizations was the "Medical Association of Little Rock and Pulaski County," which was organized about the close of the Civil War. Dr. Lorenzo Gibson was president of this society at the time of his death in 1866. An old copy of the constitution and by-laws bears the names of P. P. Burton, E. V. Deuell, S. D. Dodge, J. G. Halliburton, George C. Hart, W. Haythornwhite, P. O. Hooper, Robert B. King, R. G. Jennings, J. J. McAlmont, S. C. Murphy, C. V. Meador, John Kirkwood, C. Peyton, M. K. Starke, C. M. Taylor, W. Thompson and Claiborne Watkins.

In October, 1875, a new constitution and by-laws were adopted and the name was changed to the "State Medical Society of Arkansas." The new constitution was signed by over 200 members and the following officers were elected: Dr. W. B. Welch, President; Drs. Albert Dunlap, Randolph Brunson, J. P. Mitchell and E. T. Dale, Vice-Presidents; Dr. R. G. Jennings, Secretary; Dr. A. L. Breysacher, Treasurer. In July, 1890, the society began the publication of a monthly "Journal" with Dr. Lorenzo P. Gibson as managing editor. The present Journal of the society began in June, 1904. It is published monthly, records the proceedings of the meetings of the society and the papers read, besides many contributed articles on the treatment of various diseases, sanitation, etc. In its columns are also published the proceedings of the various county societies, thus enabling the physicians of the State to maintain a close relationship with each other.

ABSTRACTS FROM THE PROCEEDINGS OF THE STATE MEDICAL ASSOCIATION OF ARKANSAS, 1871-1875

Pursuant to previous agreement, physicians throughout the State of Arkansas met November 1, 1870, in Little Rock, and organized a State Medical Association.

The following officers were elected:

President, P. O. Hooper, Pulaski County. Vice-Presidents, E. R. Duval, Sebastian County; W. P. Hart, Hempstead County; J. W. Jones, Jefferson County. Recording Secretaries, E. V. Deuell, Pulaski County; Pulian C. Field, Sebastian County. Corresponding Secretary, Claiborne Watkins, Pulaski County. Treasurer, J. B. Bond, Pulaski County.

The charter was recorded with the County Clerk, Pulaski County, on the 14th day of March, 1871.

The second annual meeting was held November 5 and 6, 1871, in Little Rock.

The following officers were elected for the ensuing year:

President, J. M. Holcombe, Pine Bluff. Vice-Presidents, O. A. Hobson, Hot Springs; J. F. Davies, Mississippi County; W. W. Bailey, Fort Smith; Recording Secretaries, E. V. Deuell and Ed Cross, Little Rock. Corresponding Secretary, Claiborne Watkins, Little Rock; Treasurer, J. B. Bond, Little Rock.

The local county medical societies organized at this time included: Franklin, Sebastian, Drew, Hempstead, Crawford, Jefferson, Pulaski and Ashley.

The third annual meeting was held in Little Rock, January 6, 7, and 8, 1873. At this session the following officers were elected:

President, A. A. Linthicum, Helena; Vice-Presidents, Geo. C. Hart, Little Rock; D. B. Thompson, Princeton; W. A. C. Sayle, Lewisburg. Recording Secretaries, J. H. Lenow and J. A. Dibrell, Jr., Little Rock; Corresponding Secretary, P. R. Ford, Helena. Treasurer, Wm. G. Wright, Little Rock.

The fourth annual session was held in Little Rock, October 9, 10 and 11, 1873. Officers for 1873 and 1874 as follows:

President, E. R. Duval, Fort Smith; Vice-Presidents, S. C. Murphy, Little Rock; F. N. Burke, Helena; G. H. Fort, Lewisville; Recording Secretaries, J. H. Lenow and J. A. Dibrell, Jr., Little Rock. Corresponding Secretary, P. R. Ford, Helena; Treasurer, E. Cross, Little Rock.

The fifth annual meeting of the State Medical Association of Arkansas met in Little Rock, October 20, 1874. Officers for 1874 and 1875 as follows:

President, W. B. Welch, Washington County. Vice-Presidents, William Thompson,

Pulaski County; Almon Brooks, Hot Spring County; James A. Dibrell, Sr., Crawford County; Recording Secretaries, Jno. R. Dale and J. P. Mitchell, Pulaski and Johnson Counties. Corresponding Secretary, E. H. Skipwith, Pulaski County. Treasurer, Thomas Smith, Pulaski County.

The sixth annual meeting was held in Little Rock, November 1, 2, and 3, 1875. Presided by First Vice-President, Wm. Thompson.

Officers elected:

President, William H. Barry, Garland County. Vice-Presidents, J. A. Dibrell, Sr., Crawford County; W. A. C. Sayle, Conway County; John R. Dale, Clark County. Recording Secretaries, Jas. H. Southall and J. M. Pirtle, Pulaski County. Corresponding Secretary, S. W. Vaughan, Garland County. Treasurer, David H. Dungan, Pulaski County.

In the revised constitution prepared at this meeting the title of the Association was made to read Arkansas State Medical Association.

DATE, PLACE OF MEETING, AND OFFICERS OF THE ARKANSAS MEDICAL SOCIETY FOR THE PAST FIFTY-FIVE YEARS

October 12-13, 1875; Little Rock; President, W. B. Welch; Vice-President, A. Dunlap, R. Brunson, E. T. Dale; Secretary, R. G. Jennings; Treasurer, A. L. Breysaecher; (1875-1877).

September 1-2, 1877; Hot Springs; President, A. N. Carrigan; Vice-Presidents, T. J. Pollard, J. A. Stinson, A. A. Horner, Drake McDowell; Secretary, R. B. Jennings; Treasurer, A. L. Breysaecher; (1877-1878).

May 1-2, 1879; Fort Smith; President, A. A. Horner; Vice-Presidents, W. H. Hawkins, Isaac Folsom, T. W. Hurley; Secretary, R. G. Jennings; Treasurer, A. L. Breysaecher; (1878-1879).

May 7-9, 1880; Little Rock; President, E. T. Dale; Vice-Presidents, J. B. Cummins, A. Dunlap, J. T. Hamilton, W. M. Lawrence; Secretary, R. G. Jennings; A. L. Breysaecher; (1879-1880).

April 27-28, 1881; Little Rock; President, W. M. Lawrence; Vice-Presidents, J. E. Bennett, W. A. C. Sayle, R. B. Christian, D. H. Stayton; Secretary, R. G. Jennings; Treasurer, A. L. Breysaecher; (1880-1881).

May 31, June 1, 1882; Little Rock; President, R. G. Jennings; Vice-President, D. C. Ewing, G. B. Malone, W. H. Heard, H. H. Turner; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1881-1882).

May 30-31, 1883; Little Rock; President, J. H. Southall; Vice-Presidents, D. J. Prather, J. A. Dibrell, H. H. Turner; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1882-1883).

April 30, May 2, 1884; Little Rock; President, J. M. Keller; Vice-Presidents, Z. Orto, J. F. Blackburn, S. M. Carrigan, G. W. Hudson, D. S. Mills, H. H. Turner; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1883-1884).

April 22-23, 1885; Little Rock; President, T. W. Hurley; Vice-President, E. H. Alexander, J. J. McAlmont, R. S. Wallis, W. P. Hart; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1884-1885).

April 28-29, 1886; Little Rock; President, W. H. Hawkins; Vice-Presidents, W. W. Hipolite, W. B. Lawrence, J. P. Mitchell, T. E. Murrell, H. L. Routh, J. S. Shibley; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1885-1886).

June 1-3, 1887; Little Rock; President, J. A. Dibrell, Sr.; Vice-Presidents, J. F. Simmons, P. C. West, F. N. Burke, C. Watkins; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1886-1887).

April 25-27, 1888; Fort Smith; President, W. P. Hart; Vice-Presidents, J. G. Eberle, J. W. Coffman, D. P. Ruff; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1887-1888).

May 28-30, 1889; Pine Bluff; President, E. Bentley; Vice-Presidents, B. Hatchett, W. H. Hill, A. J. Vanee, C. S. Gray; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1888-1889).

May 14-16, 1890; Little Rock; President, Z. Orto; Vice-Presidents, J. T. Clegg, W. P. Owen, T. E. Murrell, R. M. Wilson; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1889-1890).

April 29-May 1, 1891; Hot Springs; President, J. A. Dibrell, Jr., Vice-Presidents, J. B. Payne, R. N. Ross, J. L. Goree, J. A. Williams; Secretary, L. P. Gibson; Treasurer, A. L. Breysaecher; (1890-1891).

June 2-3, 1892; Little Rock; President, J. S. Shibley; Vice-Presidents, J. C. Minor, J. R. Autrey, R. M. Drummound, C. E. Nash; Vice-Presidents, L. P. Gibson; Treasurer, A. L. Breysacher; (1891-1892).

May 31-June 2, 1893; Batesville; President, J. T. Jelks; Vice-Presidents, A. C. Jordon, J. C. Wallis, J. W. Case, G. D. Huddleston, Secretary, L. P. Gibson; Treasurer, A. L. Breysacher; (1892-1893).

May 23-25, 1894; Pine Bluff; President, D. C. Ewing; Vice-Presidents, Adam Guthrie, Jr., W. W. Bailey, D. J. Jones, E. A. Baxter; Secretary, L. P. Gibson; Treasurer, A. L. Breysacher; (1893-1894).

May 1-4, 1895; Little Rock; President, A. C. Jordan; Vice-Presidents, J. D. Southard, M. Fink, G. W. Hudspeth; Secretary, L. P. Gibson, Treasurer; A. L. Breysacher; (1894-1895).

April 29-30, 1896; Fort Smith; President, L. P. Gibson; Vice-Presidents, J. W. Hayes, W. W. Hipolite; Secretary, F. Vinsonhaler; Treasurer, A. L. Breysacher; (1895-1896).

June 1-3, 1897; Little Rock; President, A. J. Vance; Vice-Presidents, J. G. Eberle, C. P. Meriwether; Secretary, F. Vinsonhaler; Treasurer, J. H. Lenow; (1896-1897).

April 25-27, 1898; Eureka Springs; President, J. G. Eberle; Vice-Presidents, Matt S. Dibrell, C. Russwurm; Secretary, F. Vinsonhaler; Treasurer, J. H. Lenow; (1897-1898).

May 10-12, 1899; Little Rock; President, J. W. Hayes; Vice-Presidents, J. W. Scales, E. G. McCormick; Secretary, F. Vinsonhaler; Treasurer, R. C. Thompson; (1898-1899).

May 15-17, 1900; Fayetteville; President, Claiborne Watkins; Vice-Presidents, S. M. Carrigan, O. M. Bourland; Secretary, F. Vinsonhaler; Treasurer, R. C. Thompson; (1899-1900).

May 14-16, 1901; Hot Springs; President, W. B. Lawrence; Vice-Presidents, L. Kirby, M. L. Norwood; Secretary, F. Vinsonhaler; Treasurer, R. C. Thompson; (1900-1901).

May 13-15, 1902; Little Rock; President, F. Vinsonhaler; Vice-Presidents, C. R. Shinault, W. N. Yates; Secretary, J. P. Runyan; Treasurer, R. C. Thompson; (1901-1902).

April 30-May 2, 1903; Jonesboro; President, C. R. Chinault, Vice-Presidents, W. N. Yates, L. Kirby, W. A. Brown; Secretary, J. P. Runyan; Treasurer, R. C. Thompson; (1902-1903).

May 3-5, 1904; Texarkana; President, Leonidas Kirby; Vice-President, J. L. Burns, J. C. Cleveland, J. C. Wallis; Secretary, J. P. Runyan; Treasurer, R. C. Thompson; (1903-1904).

May 16-18, 1905; Little Rock; President, J. P. Runyan; Vice-Presidents, J. L. Butler, H. H. Canfield, A. G. Clyne; Secretary, C. C. Stephenson; Treasurer, R. C. Thompson; (1904-1905).

May 7-10, 1906; Hot Springs; President, S. M. Carrigan; Vice-Presidents, W. S. Stewart, M. S. Dibrell, D. W. Bright; Secretary, C. C. Stephenson; Treasurer, R. C. Thompson; (1905-1906).

May 14-16, 1907; Little Rock; President, C. T. Drennen; Vice-Presidents, St. Cloud Cooper, J. J. Morrow, L. J. Gillespie; Secretary, C. C. Stephenson, Treasurer, J. W. Scales; (1906-1907).

May 12-15, 1908; Little Rock; President, C. C. Stephenson, Vice-Presidents, M. Fink, J. L. Butler, C. D. Sephens; Secretary, Morgan Smith; Treasurer, J. W. Scales; (1907-1908).

May 18-21, 1909; Pine Bluff; President, J. T. Clegg, Vice-Presidents, E. K. Williams, L. H. Hall, B. D. Luck; Secretary, Morgan Smith; Treasurer, J. W. Scales; (1908-1909).

May 3-6, 1910; Little Rock; President, J. H. Lenow; Vice-President, H. D. Wood, E. L. Watson, F. A. Corn; Secretary, Morgan Smith; Treasurer, J. W. Scales; (1909-1910).

May 3-5, 1911; Fort Smith; President, R. C. Dorr; Vice-Presidents, Thad Cothorn, L. F. Magee, J. B. Grammar; Secretary, Morgan Smith; Treasurer, J. W. Scales; (1910-1911).

May 13-16, 1912; Hot Springs; President, Morgan Smith; Vice-Presidents, J. B. Roe, J. C. Amis, J. W. Webster; Secretary, C. P. Meriwether; Treasurer, J. W. Scales; (1911-1912).

May 20-23, 1913; Little Rock; President, Ed R. Dibrell; Vice-Presidents, G. A. Hebert, St. Cloud Cooper, R. Q. Patterson; Secretary, C. P. Meriwether; Treasurer, J. W. Scales; (1912-1913).

May 19-22, 1914; El Dorado; President, Frank B. Young; Vice-Presidents, L. E. Moore, S. L. Steer, F. G. Richardson; Secretary, C. P. Meriwether; Treasurer, W. R. Bathurst; (13-14).

May 3-6, 1915; Little Rock; President, St. Cloud Cooper; Vice-Presidents, G. A. Warren, R. A. Hilton, R. S. Rice; Secretary, C. P. Meriwether; Treasurer, W. R. Bathurst; (1914-1915).

May 2-4, 1916; Texarkana; President, J. C. Wallis; Vice-Presidents, C. J. March, F. T. Murphy, O. M. Bourland; Secretary, C. P. Meriwether; Treasurer, W. R. Bathurst; (1915-1916).

May 1-3, 1917; Little Rock; President, M. L. Norwood; Vice-Presidents, L. L. Purifoy, J. M. Lemons, W. R. Brooksher, Sr.; Secretary, C. P. Meriwether; Treasurer, W. R. Bathurst; (1917-1918).

May 20-22, 1919; Little Rock; President, E. F. Ellis, Vice-Presidents, P. H. Phillips, H. H. Rightor, R. Y. Phillips; Secretary, C. P. Meriwether; Treasurer, W. R. Bathurst; (1918-1919).

June 8-10, 1920; Eureka Springs; President, Geo. S. Brown; Vice-Presidents, C. E. Kitchens, A. L. Carmichael, R. E. Cooksey; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1919-1920).

May 3-5, 1921; Hot Springs; President, G. A. Warren; Vice-Presidents, R. H. Huntington, A. J. Clingan, Thad Cothorn; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1920-1921).

May 17-19, 1922; Little Rock; President, Charles H. Cargile; Vice-Presidents, Don Smith, A. M. Elton, J. O. Rush; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1921-1922).

May 2-4, 1923; Hot Springs; President, Robert Caldwell; Vice-Presidents, Earnest A. Purdum, Jefferson D. Southard, Lorenzo T. Evans; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1922-1923).

May 20-22, 1924; Fayetteville; President, W. T. Wootton; Vice-Presidents, J. O. Rush, J. C. Graves, S. J. Albright; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1923-1924).

May 13-15, 1925; Little Rock; President, H. Moulton; Vice-Presidents, H. D. Wood, S. J. Hesterly, L. T. Evans; Secretary, W. R. Bathurst; Treasurer, R. L. Saxon; (1924-1925).

May 18-20, 1926; Hot Springs; President, H. D. Wood; Vice-Presidents, J. L. Smiley, H. R. McCarroll, S. F. Hoge; Secretary, W. R. Bathurst; Treasurer, R. J. Calcote; (1925-1926).

May 11-13, 1927; Little Rock; President, J. M. Lemons; Vice-Presidents, G. E. Tarkington, T. F. Kittrell, J. H. Fowler; Secretary, W. R. Bathurst; Treasurer, R. J. Calcote; (1926-1927).

May 1-3, 1928; El Dorado; President, Henry Thibault, Vice-Presidents, Homer Scott, J. B. Wharton, O. J. T. Johnston; Secretary, W. R. Bathurst; Treasurer, R. J. Calcote; (1927-1928).

May 7-9, 1929; Hot Springs; President, R. H. T. Mann; Vice-Presidents, H. H. Niehuss, O. M. Bourland, Sam J. Albright; Secretary, W. R. Bathurst; Treasurer, R. J. Calcote.

May 6-8, 1930; Fort Smith; President, Thad Cothorn; Vice-Presidents, Geo. B. Fletcher, B. H. Hawkins, J. G. Gladden; Secretary, W. R. Bathurst; Treasurer, R. J. Calcote.

Obituary

Dr. St. Cloud Cooper of Fort Smith, aged 69, founder and head of the Cooper Clinic and a leading physician and surgeon of western Arkansas, died March 22, 1930, of angina pectoris.

Dr. Cooper was born at Jefferson, Texas. He had lived in Fort Smith for about 35 years and was active in professional and fraternal circles. He served as President of the Arkansas Medical Society in 1915.

He is survived by his wife, one son, Hudson Cooper of Carrollton, Mo.; two daughters, Mrs. Robert Beard, Fargo, N. D., and Mrs. E. M. Lockett, Johnson City, Tenn.; three sisters, Mrs. Maud Hammond, Carrollton, Mo.; Mrs. Texie Warren of Honolulu; Mrs. Hattie Kneisley of Los Angeles, and one brother, Dr. Harry Cooper of Honolulu.

MEEK, EDWARD—Dr. Edward Meek of Little Rock, died April 10, 1930. Aged 77. He had been a resident of Little Rock and North Little Rock for the past fifty years. He was born in Indianola, Ia., and after graduating in medicine he moved to North Little Rock. He was a member of the Christian Church.

Dr. Meek is survived by his wife and two daughters, Mrs. W. R. Crow of Little Rock and Mrs. George Puterbaugh of McAllister, Okla.

Program
WOMAN'S AUXILIARY
of the
ARKANSAS MEDICAL SOCIETY
SIXTH ANNUAL MEETING

OFFICERS

President—Mrs. C. G. Hinkle, Batesville.
President-Elect—Mrs. C. E. Oates, Little Rock.
Vice-President—Mrs. W. R. Brooksher, Jr., Ft. Smith.
Secretary—Mrs. O. J. T. Johnston, Batesville.
Treasurer—Mrs. B. A. Rhinehart, Little Rock.
Publicity Secretary—Mrs. G. D. Murphy, El Dorado.
Parliamentarian—Mrs. W. V. Laws, Hot Springs.
Historian—Mrs. C. W. Garrison, Little Rock.

DIRECTORS

Mrs. Grayson Tarkington, Hot Springs.
Mrs. J. C. Cunningham, Little Rock.
Mrs. J. B. Wharton, El Dorado.
Mrs. S. A. Drennen, Stuttgart.

PAST PRESIDENTS

Mrs. C. W. Garrison, Little Rock.
Mrs. Dewell Gann, Sr., Benton.
Mrs. Charles T. Drennen, Hot Springs.
Mrs. T. G. Porter, Hazen.

STANDING COMMITTEES

Organization: Chairman, Mrs. W. R. Brooksher, Jr., Ft. Smith; Mrs. R. B. Roberts, Camden; Mrs. J. S. Kolb, Clarksville; Mrs. W. W. Verser, Harrisburg; Mrs. W. H. Blankenship, Pine Bluff; Mrs. J. B. Wharton, El Dorado; Mrs. J. C. Cunningham, Little Rock; Mrs. S. A. Drennen, Stuttgart; Mrs. Grayson Tarkington, Hot Springs.

Public Relations: Chairman, Mrs. L. T. Evans, Batesville; Mrs. C. E. Oates, Little Rock; Mrs. M. C. John, Stuttgart; Mrs. E. E. Barlow, Dermott.

Student Loan Fund: Chairman, Mrs. T. G. Porter, Hazen; Mrs. L. S. Purifoy, El Dorado; Mrs. T. F. Hudson, Osceola; Mrs. I. N. McCollum, Conway; Mrs. C. E. Oates, Little Rock.

Education and Public Health: Chairman, Mrs. R. C. Kory, Little Rock; Mrs. J. R. Lynn, Hazen; Mrs. C. T. Drennen, Hot Springs; Mrs. S. J. Wolferman; Fort Smith.

Hygeia: Chairman, Mrs. R. H. T. Mann, Texarkana; Mrs. E. L. Thompson, Hot Springs; Mrs. J. W. Slaughter, El Dorado; Mrs. B. Brewster, McCrory; Mrs. Ed McKnight, Brinkley; Mrs. E. H. White, Little Rock.

Program: Chairman, Mrs. C. T. Drennen, Hot Springs; Mrs. C. W. Garrison, Little Rock; Mrs. W. R. Brooksher, Jr., Ft. Smith; Mrs. D. W. Goldstein, Ft. Smith; Mrs. W. W. Verser, Harrisburg.

Memorial: Chairman, Mrs. D. A. Rhinehart, Little Rock; Mrs. W. A. Eberle, Ft. Smith; Mrs. J. K. Shepherd, El Dorado.

Constitution and By-Laws: Mrs. Grayson Tarkington, Hot Springs.

Host: Auxiliary to Sebastian County Medical Society; Mrs. H. H. Smith, Ft. Smith.

ENTERTAINMENT COMMITTEE

Mrs. D. W. Goldstein, Mrs. A. F. Hoge, Mrs. M. E. Foster.

COMMITTEE ON AUTOMOBILES

Mrs. Walter G. Eberle, Mrs. W. F. Rose, Mrs. C. S. Holt, Mrs. J. S. Southard, Mrs. J. A. Foltz.

COMMITTEE ON FLOWERS FOR
MEMORIAL SESSION

Mrs. D. R. Dorente, Mrs. I. F. Jones, Mrs. H. C. Dorsey, Mrs. J. H. Buckley, Mrs. Hugh Johnson.

COMMITTEE ON REGISTRATION

Mrs. A. A. Blair, Mrs. Pierre Redmon, Mrs. F. H. Krock, Mrs. S. P. Stubbs.

PUBLICITY COMMITTEE

Mrs. C. S. Bungart, Mrs. C. B. Billingsley, Mrs. J. E. Little.

FINANCE COMMITTEE

Mrs. Dewell Gann, Sr., Mrs. S. B. Hinkle, Mrs. Frank Vinsonhaler, Mrs. W. G. Hodges.

P R O G R A M

Tuesday, May 6th, 10 to 12 A. M.

Registration—Goldman Hotel.

Luncheon—12:30. Ward Hotel. Executive Board Meeting.

BUSINESS MEETING

Tuesday Afternoon—2:00 to 4:00

Meeting called to order by President of Auxiliary to Sebastian Co. Medical Society, Mrs. H. H. Smith.

Invocation—Dr. Wallace R. Bacon, of the First Christian Church.

Address of Welcome—Mrs. H. H. Smith.

Presentation of President, Mrs. C. G. Hinkle, Batesville.

Response to Address of Welcome, Mrs. C. Travis Drennen, Hot Springs.

Presentation of President of State Medical Society, Dr. Thad Cothorn.

Minutes of 1929 meeting and subsequent board meetings.

Tuesday Afternoon—4:00 O'clock

Tea—Home of Mrs. A. F. Hoge, 3611 Free Ferry.
Register at desk for transportation.

MEMORIAL SESSION

Wednesday 8:30 to 9:45 A. M.

(Joint meeting with Arkansas Medical Society).

BUSINESS SESSION

10:00 A. M.—Ward Hotel

Meeting called to order by Mrs. C. G. Hinkle State Auxiliary President.

Reports of Officers and Committees.

Reports of County Auxiliaries.

Report of Woman's Auxiliary to the American Medical Association—Mrs. C. W. Garrison.

Report of Woman's Auxiliary to the Southern Medical Association—Mrs. D. A. Rhinehart.

Report of Resolutions Committee.

Report of Nominating Committee.

Election of Officers.

Wednesday—1:00 P. M.

Luncheon—Hardscrabble Country Club.

Toast Mistress—Mrs. W. R. Brooksher, Jr.

President's Address.

Mrs. C. G. Hinkle, Batesville.

Vocal Selection—Mrs. H. H. Smith.

Presentation of President for 1930-31—Mrs. C. E. Oates, Little Rock.

Piano Selection—Mrs. Eugene Stevenson.

Adjournment.

Thursday, May 8th—Automobile drives.

County Societies

ARKANSAS COUNTY

(Reported by E. B. SWINDLER, Sec.)

The regular monthly meeting of the Arkansas County Medical Society met in De Witt, March 11, with the following in attendance: Lowe, Whitehead, Rasco, Park, Dickens, John, Drennen, Wilson and Swindler.

The scientific program was as follows:

"Diabetes Mellitus" by Dr. S. F. Hoge, Little Rock.

"Cerebrospinal Meningitis," by Dr. R. H. Whitehead, West Helena.

"Surgical Consideration of Abdominal Symptoms," by Dr. Oscar Gray, Little Rock.

Efforts to reorganize the Third District Medical Society were approved.

A committee was appointed to arrange a program for the April meeting in conformity with the Arkansas Tuberculosis Association.

ARKANSAS COUNTY

(Reported by E. B. SWINDLER, Sec.)

Members of the Jefferson County Medical Society were the guests of the Arkansas County Medical Society at the regular meeting, April 8, at Stuttgart. Dinner was served by the Loyal Daughters.

Members present: Whitehead, Park, Rasco, Lowe, Riley, Fowler, Jameson, Neighbors, John, Drennen and Swindler. Visitors: Dr. and Mrs. Palmer, Dr. and Mrs. Woods, Drs. Gurney, Cunningham, Caples, McMullen, Beard, Hankinson, Lowe, Lemon, Power, Pittman, John, Crump, Gill and Smith.

The visitors gave the program which consisted of the following:

"Duodenal Ulcer," by Dr. J. T. Palmer.

"Epilepsy," by E. C. McMullen.

"Cholecystitis," by W. G. Pittman.

BENTON COUNTY

(Reported by C. S. WILSON, Sec.)

The regular monthly meeting of the Benton County Medical Society was held at Rogers in the City Hall building on March 13.

Members present were: Harrison, Wilson, Powell, Eubanks, Greene, McNeil, Smiley, Koobs, Clemmer, Duncan, Moore, Scott, E. A. Pickens, Estes, Curry, Highfill. Visitors: Lowdermilk, Grantham, Robinson, Mock, Ellis, Henry, McCormick and Craig.

The scientific program was excellent and consisted of the following:

"Asthma," by Dr. Claude R. Lowdermilk of Galena, Kansas.

Dr. S. A. Grantham of Joplin, Missouri made a talk on Bone Surgery.

The next meeting will be held April 10, at which time Dr. Balyeat of Oklahoma City will address the Society on "Allergy."

DESHA COUNTY

(Reported by W. B. GRAYSON, Sec.)

The Desha County Medical Society held its monthly meeting at McGehee, February 27, 1930. Transactions of business and election of officers occupied the first part of the session. Officers elected were: President, V. MacCammon, Arkansas City; Secretary-Treasurer, W. B. Grayson, McGehee; Delegate to State meeting, A. Isom, Dumas.

Dr. MacCammon made an interesting talk on the practice of medicine in Southeast Arkansas, long years ago, when Arkansas City was an important river port.

Dr. Isom gave a resume of his five weeks visit to the clinics of New York City, especially calling attention to the large amount of work being done under spinal anesthesia.

Case reports were given by several members.

OUACHITA COUNTY

(Reported by R. B. ROBINS, Sec.)

The Ouachita County Medical Society held its regular monthly meeting Friday evening, March 7th, at the Camden Hospital.

Election of officers was held, which resulted as follows:

President, J. S. Rinehart, Camden; Vice-President, J. B. Jameson, Camden; Secretary-Treasurer, R. B. Robins, Camden; Delegate, J. B. Jameson, and Alternate, R. C. Kennerly, Bearden.

The program consisted of motion pictures. A two-reel film "Appendicitis," and "Management of Breech Presentation" were shown. Motion pictures of the members of the Society were also shown.

After the meeting refreshments were served.

PHILLIPS COUNTY

(Reported by M. FINK, Sec.)

The Phillips County Medical Society recently celebrated its 59th anniversary, March 4, with a dinner.

Dr. George Storm of West Helena was elected president of the organization; Dr. J. W. Bean of Marvell, vice-president, and Dr.

M. Fink of Helena was re-elected, for the third consecutive term, secretary and treasurer.

Dr. Morris Henry and Dr. J. W. Butts were named members of the Governing Board of Helena Hospital to succeed Dr. W. C. King and Dr. J. B. Ellis, whose terms expired.

Dr. W. B. Bruce, director of the Phillips County health unit, invited members of the association to meet with the health unit at their April meeting.

PHILLIPS COUNTY

(Reported by DR. M. FINK, Sec.)

The Phillips County Medical Society was entertained by the Phillips County Health Unit at a luncheon at Habibs in Helena, April 1.

Among the guests were Dr. C. W. Garrison, State Health Officer; Hon. Peter A. Deisch, legal advisor of the State Medical Society; Dr. Gordon Hastings of the U. S. Public Health Department and Judge John C. Sheffield, father of public health work in Phillips County.

After addresses from Dr. Garrison, Dr. Hastings, Mr. Deisch and Judge Sheffield, a program of music and dances, under the auspices of Mrs. I. A. Metz, was rendered.



Dr. D. A. Rhinehart, Little Rock

Book Reviews

A WONDERFUL NEW BOOK BY A MEMBER OF THE ARKANSAS MEDICAL SOCIETY

Roentgenographic Technique. A manual for physicians, students and technicians. By Darmon A. Rhinehart, A. M., M. D., Little Rock, Arkansas, Professor of Roentgenology and Applied Anatomy, School of Medicine, University of Arkansas; Roentgenologist to St. Vincent's Infirmary, Missouri Pacific Railroad Hospital, and the Arkansas Childrens Hospital. With 159 illustrations. Published by Lea & Febiger, Philadelphia. 1930. Price, \$5.50.

Quite naturally, every member of the Arkansas Medical Society will be proud of a valuable scientific book being written by a fellow member, but the mere fact of residence or of State pride in an author has no bearing whatever in the opinion of this reviewer that this great book is the outstanding one of the year on Roentgenographic Technique. We should express the same opinion had the author been from Kalamazoo or Hardscrabble, Kentucky. But being that he is a Little Rock man we are doubly gratified to express that opinion. Not only should the physicians of Little Rock be proud of him, but the profession of the whole State. His book contains more original matter and covers more subjects than that of any book ever before published, and confidently may be expected soon to be in the hands of physicians throughout the United States, and probably abroad.

It is scarce necessary to say that a professor of such learning and experience is a teacher of unusual ability and that in his practice he reaches the highest ideals in medicine. Principally, his book is devoted to the technique in x-ray examinations and while, of course, it is of very special interest and importance to all directly engaged in this particular realm, it is perhaps of equal importance to physicians, surgeons, and specialists. And further it will prove equally valuable to dentists in that part of the work devoted to the teeth, pyorrhea, and so forth.

The first five chapters describe electrical currents, x-ray machines, and dark room equipment. In the succeeding three chapters, the author gives valuable information published for the first time. They show his introductory and advanced experiments including "A Basic Roentgenographic Technique." Chapter IX takes up "Practical Exposure Technique." Judging the quality of Roentgenograms, considering density, contrast, de-

tail and amount of distortion in determining the quality of finished x-ray films, Dr. Rhinehart asserts that "peristaltic motion of the stomach will usually blur films made with one exposure time of more than one second." In Chapter XI, "Miscellaneous Instructions," are included as in selecting the size of film to use in posing; in preparation of patients, and general precautions that should be observed. Chapters XII and XIII pertain to the upper and lower extremities and Chapter XIV the vertebral column, thorax and pelvis. "The Head" is the study of Chapter XV, and the author stresses the value of Roentgenography in the examination of the head and its various divisions for the presence of disease or injury.

Dentists, as well as physicians, will find Chapter XVI, devoted to "The Teeth," of invaluable interest. The author is of the opinion that alveolar abscesses around the apices of the teeth and pyorrheal infections around the necks of the teeth are foci from which infections may spread to more important structures. Chapter XVII takes up the thoracic viscera, the most important constituents of the mediastinum, the heart and aorta. Also, he stresses the value of x-rays, examinations of the lungs and pleura in detecting the presence and extent of disease of the lungs. In this Chapter he says of the thymus gland that it is frequently enlarged in infants and young children, causing interference with respiration and swallowing. He goes further and says that cases of sudden death, during anesthesia administered for the removal of adenoids or tonsils, may be attributed to this condition which might have been detected by Roentgenograms.

The gastrointestinal tract is considered in Chapter XVIII, which is of great value and interest. The esophagus, stomach, small and large intestine, appendix, gall-bladder and liver are thoroughly dealt with. Roentgenologic examinations, the author holds, is one of the few, but one of the most useful methods of examination of the intestinal tract, as well as the gall-bladder for evidence of disease. The urinary tract is considered in Chapter XIX, and kidneys, ureters, bladder, and urethra are dealt with fully. The closing chapter deals with "Miscellaneous Examinations" including "Localization of Foreign Bodies," "X-ray Examinations During Pregnancy," and "Examination of Discharging Sinuses."

This cursory and imperfect review will serve to convince the reader of the value of this work. It is profusely illustrated and the price certainly is more than merely reasonable, considering the research, the learning, the experience, the labor in writing the book and preparing the illustrations, we would say it is a rare bargain at the price.

An Introduction to the Study of Physic (Now For the First Time Published) by William Heberden (1710-1801), with a reprint of Heberden's "Some Account of a Disorder of the Breast." Six illustrations. Published by Paul B. Hoeber, Inc., New York. Price \$2.00 net.

This unusual and interesting book should attract widespread attention of the medical profession. Quoting William Heberden, "There are several books extant written with the design of directing beginners in the study of physic, how they are to proceed in order to become masters of their profession."

The History of Hemostasis.—By Samuel Clark Harvey, M. D., Professor of Surgery, Yale University; Surgeon in Chief, New Haven Hospital. 19 illustrations. Published by Paul B. Hoeber, Inc., New York. Price \$1.50 net.

This very interesting little volume gives the beginning of hemostasis and the history of hemostasis in the western world. It also presents some very rare illustrations.

The Conquest of Cancer by Radium and other Methods.—By Daniel Thomas Quigley, M. D., F. A. C. S., Instructor in Surgery in the University of Nebraska College of Medicine; Fellow of the American Medical Association; Member of the American Association for the Advancement of Science, Nebraska Academy of Sciences. North American Radiological Society, American Radium Society. Illustrated with 334 engravings. Published by F. A. Davis Company, Philadelphia. Price \$6.00 net.

The four sections shown in the table of contents describe the following subjects: Cancer Causation and Prophylaxis; Treatment of Cancer; A Summary of What We Know Concerning Cancer and Diseased Conditions (in addition to cancer) in which radium is of value.

International Clinics.—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, Pa. Volume II. Thirty-Eight Series. Published by J. B. Lippincott Company, Philadelphia.

In addition to the many interesting scientific articles we find a department of "Medical Economics." In this issue it deals with "The Economic Basis of Medical Charges"

by M. M. Davis, Ph. D., New York City. He shows that among numerous recent alterations in medical practice, the most essential economic change has been in the amount of the capital required for adequate medical service, and in the manner in which this capital is provided. The amount of capital needed had greatly increased. This capital now appears to be furnished in increasing degree by lay individuals, organizations or public authorities, and less through provision by individual physicians.

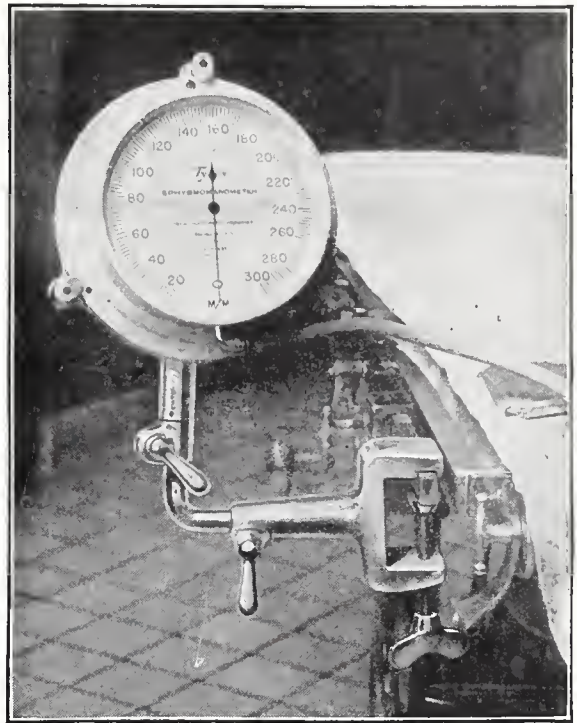
The Climacteric (The Critical Age). By Gregorio Maranon, Professor of Medical Pathology in the Madrid General Hospital, Member of the Royal National Academy of Medicine. Translated by K. S. Stevens. Edited by Carey Culbertson, A. B., M. D., F. A. C. S., Associate Clinical Professor of Obstetrics and Gynecology, Rush Medical College of the University of Chicago. Published by The C. V. Mosby Company, St. Louis, Mo. Price \$6.50.

The present edition of this book is translated from the second Spanish one which appeared in 1925. However, much data has been added to bring the material up-to-date.

In this book the author demonstrates the majority of our acts and feelings, remaining perforce within its zone of influence. The material found in climacteric humanity is particularly propitious for the study of this problem. Hence a consideration of sexual psychology occupies a great part of this book, aside from the purely gynecologic and medical matters.

The Technic of Local Anesthesia.—By Arthur E. Hertzler, A. M., M. D., Ph., LL. D., F. A. C. S. Professor of Surgery in the University of Kansas; Surgeon to the Halstead Hospital, Halstead, Kansas; to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Missouri. Fourth Edition, with 146 illustrations. Published by The C. V. Mosby Company, St. Louis, Mo. Price \$6.00.

Dr. Hertzler, the author of this volume, presents in this edition the technic which he has found most useful without any attempt to conform to the technic of others. He presents clearly the difficulties likely to be encountered in order that the beginner may take stock, so as to determine whether or not his experience warrants the undertaking, as well as the indications for the use of local anesthesia. He says, "The two dominating factors in the use of local anesthetics are the skill of the operator and the indications for their use, as well as contraindications for general anesthesia. The proper adjustment between these is the problem for each operator to solve for each patient."



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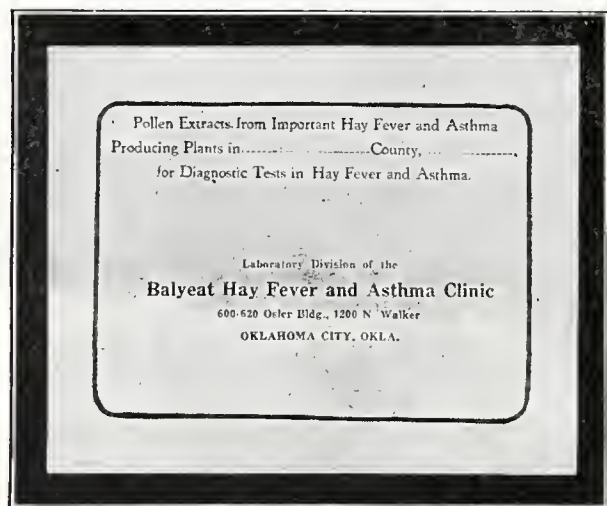
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Original Articles

ACRODYNIA WITH CASE REPORT*

ALLAN A. GILBERT, M. D., F. A. C. P.

Fayetteville

It is not my intention in this paper to do more than review briefly our present knowledge of the condition which is called aerodynia, paint as striking a clinical picture as possible, and report two cases seen recently. My reason for doing this is the fact that the condition is unusual, rather rare, perhaps often unrecognized if one is not familiar with the disease or has not seen a case. On the other hand, the clinical picture is so clear cut, well defined and different from any other condition, that once seen, will never be forgotten.

My own experience serves as a striking example. I have seen three cases, the first in 1922, the second and third last year. In the interim I am quite certain that not once did I think of aerodynia. Yet after a lapse of seven years, these cases, when seen, were immediately recognized. My only regret is that I do not have a case to present in person.

Acrodynia—Synonyms (Swift's Disease, Erythredema, Pink Disease.)

It is not definitely known how this disease originated or how long it has existed in Europe, but the first authenticated account of its presence there was in the latter part of the 16th Century. In 1828, there occurred in France, an epidemic which lasted from 1828 until 1930, attacking some forty to fifty thousand persons, the disease being of very severe form. This epidemic brought the disease to the attention of the best medical writers, and as a result, carefully recorded observations upon repeated cases removed whatever doubt might have existed as to whether the disease was an entity or a mere symptom complex.

Similar cases were subsequently reported in Germany, the West Indies, Mexico, South America and Canada. To this disease the French had given the name "aerodynisme."

In 1914, Swift reported a condition to the Australasian Medical Congress, which was similar, if not identical with the cases previously reported in France. To this disease Dr. Swift attached the name erythredema. Acrodynia literally means painful extremities, while erythredema was applied to the redness and swelling of the extremities. In January, 1920, Bilderback reported a series of cases under the diagnosis "Acrodynia" and in April of the same year Weston also reported a series of similar cases. Since then there have been innumerable case reports from all sections of the country.

There is a question as to whether the disease now present in the United States is the same as that originally described in France. A number of writers feel that possibly the great epidemic in France was due to arsenical poisoning, the French using arsenic to destroy parasites that attack the grape vines. Bilderback feels that the disease is a relatively new one, since the clinical picture is so clear cut and definite that it is impossible to conceive its failure to be recognized earlier. On the other hand Weston feels that it is a condition identical with that occurring in France, merely showing itself later in this country.

Clinical Picture. I have never seen an early case of aerodynia, but all writers agree that a change in the disposition of the child is first noted. He becomes restless, fretful, particularly during sleep, loss of appetite from slight anorexia to complete refusal to take food being present. Slight fever may be present; vomiting rarely occurs, though there may be diarrhea. Shortly after the onset definite skin changes occur, the feet and hands become swollen and painful, accompanied by intense burning and itching, particularly of the palms and soles. The hands and feet are reddened, being more intense at

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

the tips of the fingers and toes, shading off at the wrists and ankles. The involvement of the hands and feet is symmetrical. The hands and feet are cold and clammy. Trophic changes may occur and at times may be severe resulting in gangrene of the fingers or toes or deep ulcers of the hands and feet. A fine pink rash, which fades and reappears may involve the nose, cheeks and trunk. This rash is not constant and is of a maculo-vesicular type. Fever is usually present, profuse sweating of the entire body, particularly hands and feet, occurs in all cases. Photophobia is usually present and severe. As a result of the refusal to take food, the intense pain, burning and sleeplessness, there follows a marked loss in weight with muscular atonia, with diminution of reflexes. There may be a loss of hair, and the gums may become beefy and spongy with necrosis of the jaw and loss of teeth, the mouth having the appearance of an ulcerative stomatitis. In a well developed case of acrodynia, the child presents a picture of the most abject misery, frequently preferring to lie with face buried in the pillows or holding the hands over the eyes, whining constantly, rubbing hands and feet together, screaming on any attempt at examination. Gonce states that the irritability is so marked, the child so wretched, that even before the rash has appeared, acrodynia should be suspected. This is rather far fetched but having once seen a case, is quite easy to believe.

Otitis media, pyelitis, bronchitis, pneumonia may complicate the disease.

Etiology. The etiology of acrodynia is unknown. Infection and food deficiencies have been the two most constantly considered causes. Its association with focal infection, particularly tonsils, has had its supporters; the possibility that it might be a sequellum of influenza has been discussed. The fact that it is a food deficiency disease, in some way associated with or alike to pellagra has been advanced. The fact that in most cases, no dietetic deficiency has been present, has caused most observers to disregard this theory, though Warthin of Ann Arbor, feels that the pathologic changes in the skin "suggest at once the pathology of the early erythema stage of pellagra." In fact he rather suggests that it may be an infantile variety of pellagra. However, it may be stated that as yet it remains to the future to determine the cause of the disease. Practically every case occurs in infants or very young children. I was unable

to find a case report on a child older than 7 years.

Diagnosis. This should offer no difficulty if one has ever seen a well marked case. I am presenting Weston's Chart of the differential diagnosis between acrodynia and pellagra.

DIAGNOSIS BETWEEN ACRODYNIA AND PELLAGRA

ACRODYNIA

Occurs at any season.

No insanity.

Rash most pronounced at end of fingers, gradually fading until it disappears above wrists.

No tendency to recurrence.

Dorsal surface of feet and ankles seldom involved.

Erythematous rash may be present over entire body.

Palms and soles the seat of intense burning itching or perhaps numbness, and parasthesia.

Diarrhea not usually serious.

Uncomplicated cases invariably recover.

Photophobia usually present.

Great wretchedness in all cases.

Absence of appetite the rule.

PELLAGRA

Usually commences in spring or autumn.

Insanity often present.

Symmetrical rash with sharp line of demarcation on forearms and legs. No tendency to fade.

Recurrence unusual.

Dorsal surface of feet and ankles usually involved.

Not observed in pellagra.

Not present in pellagra.

Obstinate diarrhea often present.

Mortality comparatively high.

Usually absent.

Seldom occurs.

Not usually impaired in children.

Laboratory Findings. There is a marked increase in the white corpuscles, with a relative polymorphonuclear leuko-sytosis. The red cells and hemoglobin being slightly diminished. Wassermann and Pirquet reactions are negative. The urine may contain a trace of albumin and a few pus cells. The spinal fluid is clear, not under pressure and with no increase in cell count on cases dying of complications. Greenfield on autopsies performed on cases dying of complications reports con-

siderable myelin destruction in some of the fibers of the peripheral nerves, while in the central nervous system there was a diffuse increase in small cells in the gray matter, especially in the lumbo-sacral enlargement of the cord. They conclude that there is evidence of peripheral neuritis, and of chronic inflammatory changes in the cord and nerve roots, affecting the sensory nerve fibers more than the motor. Vipond had grown a positive diplococcus from the cervical glands of children suffering from acrodynia, prepared a vaccine which he has used with reported good results in several cases.

Treatment. Not knowing the exact etiologic factor responsible for the disease, the treatment is rather uncertain. It is essential to control pain and insure rest. This is best done by the application of calamine lotion to the extremities and the use of chloral in small doses. Of equal importance is making the child eat. The diet should be simple, concentrated and rich in vitamins, including codliver oil, ergosterol, vitavose and orange juice. Gavage should be resorted to if necessary. The use of the quartz lamp may prove of value and should be used. If acrodynia be not a deficiency disease, at any rate all observers follow this line of treatment. Removal of all sources of infection should be done and intercurrent complications cared for as they arise.

We cannot congratulate ourselves as regards our knowledge of the etiology or treatment of this very interesting condition, but recognizing it, we at least have the satisfaction in knowing that these really abject, miserable babies will recover, if rationally managed.

R. B., aged 2; admitted to hospital, Dec. 29, 1929, on the service of Dr. Walker. Father aged 27, living and well. Mother 24, living and well, one sister 8 months, living and well. Full term, breast fed to one year. Began to talk at ten months and walk at twelve. Diet rich in milk and green vegetables up to present illness; about three months ago the mother noticed that baby was unusually cross and irritable, did not sleep at night, refused practically all nourishment; there was profuse sweating, feet and hands became red and a fine rash appeared on the face, thighs and abdomen. There were loose mucous stools and a severe bronchitis. Ulcers developed on the soles and palms, the gums became sore and ulcerated. Fever was constantly present from shortly after onset. There was rapid loss in

weight. The child was seen by several capable men, but grew gradually worse and was brought to the hospital on December 29th. I quote Dr. Walker's physical examination.

"Patient is a male child, twenty months old, lying in bed fretting and crying. Head large, but well formed, face thin, eyes hollow, lips dry, parched and purplish red; tongue heavily coated with red margins, tonsils large and red, gums swollen, purple and ulcerated, teeth being quite loose. Eyes and ears negative. Chest thin, ribs stand out prominently; no rickety rosary; there are a few patches of small, red macular eruption on chest. Lungs hyperresonant throughout with many mucous rales. Heart not enlarged, no murmurs, though heart sounds are rather feeble. Pulse rate about 140 and slightly irregular."

Abdomen. Area of liver and splenic dullness not increased, skin shows fine muscular eruption and pronounced dermatographia. Skin is loose and flabby, no palpable masses or rigidity. Genitalia negative. Legs flexed on thighs and thighs on abdomen. Skin flabby muscle tonus greatly diminished, feet red and appear swollen, but do not pit. Marked exfoliation over plantar surfaces; several small infected ulcers plantar surface—no pathologic reflexes. Tendon reflexes diminished. The urine showed a trace of sugar, trace of albumin and a few pus cells. The white count was 36,000.

Dr. Walker asked me to see the case and I felt quite certain that it was a typical acrodynia. Despite the appearance of the child, which would have warranted a very unfavorable prognosis, because of the absence of grave complications, a favorable prognosis was given. The accepted treatment instituted, as already outlined, dietetic, rich in vitamins, calamine lotion to the skin and daily quartz high exposures. After several days there was a distinct improvement noticed. Skin of face and trunk cleared up, baby less irritable, sleeping better, taking food better, and at the end of ten days, feet had almost entirely cleared up. Temperature practically normal.

The case was discharged greatly improved on January 14, 1930, temperature normal, nutritional state fair, skin entirely clear except for some slight pigmentation. Muscle tonus fairly good, all pain and irritability gone, able to sit up and play. Reports from the parents show that the case has now entirely recovered. I shall not read the second case report, it is merely a repetition. The child was one and

one-half years old and had received orange juice and cod liver oil up to onset of present illness. This child too made a good recovery after three or four months. The treatment was the same as in the first case reported.

Mr. Clyde Crawford consulted me on October 15, 1928, in regard to his son George, aged one and one-half years. The child had been ailing for a month with slight fever, some four or five stools daily of a slight greenish cast and fairly thin, and constant crying as though in pain. The parents had noticed a rash and marked sweating.

On inspection the child presented the picture of abject misery. He was on his all-fours with his face buried into the pillow and crying almost incessantly, seemingly in pain. Though passive movements seemed to aggravate his misery and pain he constantly rocked from side to side in active movement. It was noticed that he constantly kept his face from the light and if turned towards the light he would cover up his face immediately.

The family history was negative and the birth had been normal. He had been breast fed for eleven months, had had cod liver oil and orange juice from the age of four and a half months, and was taking a well mixed diet when he became ill. His appetite had failed greatly in the month of illness. He had been in good health until this time. On examination, one was struck by a vivid pinkish erythema on the hands and feet extending up the arms to the middle of the forearm and up the leg to the ankle. He was sweating noticeably and under observation was seen at times to break out into a profuse sweat. The sweat was odorless and did not produce an odor on garments even after they had been soaked and allowed to stand.

The temperature was found to range between 99 and 100½; the pulse from 120 to 160; owing to the almost constant crying it was impossible to obtain a satisfactory respiratory count.

The reflexes were normal and further examination was essentially negative. Unfortunately, blood studies were not made, but the urine was completely negative. Physical examination and x-ray studies revealed no evidence of rachitis. Aerodynia was diagnosed. Pain on movement, spontaneous crying, photophobia and sweating continued almost unabated for nearly three weeks. The pink rash persisted.

In the third week the child was placed upon a mixture of antipyrin (in dosage of one grain per year of age in *die*) with half the amount of sodium bromide for restlessness with treble the amount of potassium citrate as an alkali. The crying lessened, but other signs were unchanged for a further two weeks when all the symptoms slowly improved. The cod liver oil and orange juice, which had been discontinued at the onset of illness, was given as a routine and the infant was encouraged to take a rich, nourishing diet. This was difficult, as the anorexia was pronounced.

The rash disappeared in January, but pain and slight photophobia were still present in March. By May, 1929, the child was apparently recovered. Owing to the distance, ultraviolet light was administered only sporadically, and then merely for its general tonic effect.

FRACTURES OF THE PELVIS*

W. R. BROOKSHER, JR., A. B., M. D.
Fort Smith

Fractures of the pelvis are no longer infrequent. The development of the coal mining industry and the increasing use of the automobile have combined with the other causes to make this a fairly common injury. In the automobile, we have the potential factors causing the injury, namely, great weight, rapidly moving, under more or less unsatisfactory control and scattered throughout the land on every highway. Consequently, there is no physician today, no matter how isolated his location may be, who may not be called upon at any time to diagnose and treat this injury.

Some idea of the frequency of the condition may be gained by reference to recent literature. Noland (1) reports 125 cases, Harding (2) 127, Ettore (3) 170 and Severs (4) 51. within the past seven years, which series, of course, do not take into account many others smaller in numbers. As contrasted with these, the largest collection of cases reported prior to 1915 was of that of Quain (5) with 127.

The increased use of the roentgen-ray for diagnosis in this type of injury has undoubtedly shown that the less severe cases are even more common than was formerly supposed. Too much emphasis cannot be placed upon

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

the matter of correct roentgenological interpretation in this injury. Technic must be exacting in order that a film of highest diagnostic quality may be obtained. Great care is to be exercised in interpretation, lest it happen that a follow-up roentgenogram made during the process of healing will show additional fractures overlooked on the initial examination.

The shape of the bony pelvis is roughly that of a heart with a wide arch, the central third somewhat flattened posteriorly, the anterior half more curved and with a fattening at the ilio-pectineal regions. The pelvis is in effect a true girdle, its two halves solidly connected anteriorly in the symphysis pubis and posteriorly through the interposition of the sacrum, which, being cuneiform and consisting of several fused vertebrae, sustains the weight of the upper body. The sites of stress or greatest weakness are therefore, at or near the sacro-iliac synchondroses, midway between the symphysis and the acetabulum and at the symphysis. Morris (6) speaks of the mechanics of the pelvis "When much strength is essential in an arch it is often prolonged in a ring to form a counter arch; i. e., the ends of the arch are tied together so as to prevent them from starting outward. Therefore, a portion of any weight carried by an arch is distributed to the center of the counter arch. Now, in the pelvis, the body and horizontal rami of the pubis form the counter arch of the sacro-femoral arch and the union of the rami of the pubes and the ischi the tie of the ischio-sacral. The ties of both arches are united in front at the symphysis, which, like the sacrum, is common to both arches. It can easily be understood, therefore, why any severe direct violence applied to the pelvis will result in fracture of the horizontal or descending rami of the pubis, the rami of the ischium and ilia external to the sacro-iliac articulation.

The former preponderance of the injury in males, estimated in texts as ninety per cent, has been equalized of recent years, largely from increase of automobile accidents. Noland (1) states that in the years 1920-1923, women constituted but ten per cent of the cases, while in the years 1923-1928, their proportion was fifty per cent of all civilian cases. Of this fifty per cent, seventy-five per cent of the injuries were received in automobile accidents. In this series of twenty-five cases, fourteen or fifty-six per cent were in women and thirteen of the

total fourteen were received in automobile accidents.

Several factors combine to make the injury a grave one; the injury to pelvic and abdominal viscera, the impairment of weight-bearing, weight-transmitting and the function of walking and the deformity of pelvic contour produced causing difficult parturition. One woman injured in this series has subsequently had a normal delivery.

The symptoms are varied and in the uncomplicated case, may be so slight as not to arouse any suspicion of the existence of a fracture. Early and correct diagnosis is not possible without the roentgen-ray in such cases. The most important symptom is pain, either near the site of fracture or indefinitely located in the pelvis. Shock is frequently present in varying degree. Tenderness is regularly noted. Crepitus is unusual and the effort to determine its presence is unwise. Partial or complete disability is almost always associated. Abdominal signs are to be noted where visceral damage is present and are to be closely watched for need of surgery. Injuries of the viscera assume first place in diagnosis and treatment. Rupture of the bladder and the urethra are the most common of these complications. Rupture of the bladder occurred in two cases in this series, one surviving.

This study was made of twenty-five cases examined roentgenologically for the surgical staffs of Sparks Memorial and Saint Edwards Mercy Hospitals for the period July, 1927-1929. The intent was to discover the final result in the cases seen from the standpoint of function. While the number of cases is obviously too small to warrant generalizations, they will at least serve as an indication of the outcome to be expected in this type of injury.

The cases have been sub-divided anatomically as follows: Fractures of the wing of the ilium, four; fractures of isolated rami of the pubes or ischii, five; central fracture of the acetabulum with inward displacement of the head of the femur through the acetabulum, one; and fractures involving complete loss of continuity of the pelvic girdle, ranging in type from the fracture of the rami of pubis and ischium on one side to more complicated multiple fractures of the pelvic ring, fifteen. The automobile account for eighteen cases; fall of rock in coal mines, four; falling down stairs, one; railway motor car wreck, one, and from a sudden sitting down due to jerking of train in starting, one.

Three deaths occurred, a mortality of 12 per cent, all from shock. In one, there was rupture of the bladder and death occurred several hours post-operatively, the condition of ruptured bladder having been promptly recognized on admission. A second case, injured by fall of rock in a coal mine, aged sixty years, was not removed from his position beneath the rock for one hour, and in addition, suffered a fracture of the shaft of the femur while the pelvic fracture was a minor type.

Four types of treatment were employed, all keeping the patient at rest in bed. Adhesive plaster strapping was used in nineteen; Buck's extension in one; the plaster cast in three; the Bradford frame in combination with extension in one and with the cast in one other; and Buck's extension alone in one. There were no open operations for reduction.

Other fractures were associated in six cases, two of the lumbar vertebrae and one each of the scapula, ulna, femur and ribs.

The results are surprisingly good as nineteen show full and complete recovery without symptoms and the males have returned to their previous occupations without handicap. In three cases fair results are reported and two cases could not be followed.

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THE TOXINS AND ANTITOXINS OF ERYSIPELAS, SCARLET FEVER AND DIPHTHERIA*

GASTON A. HEBERT, M. D.
Hot Springs National Park

The purpose of this paper is to show in a rather condensed manner the present day status of the toxins and antitoxins of erysipelas, scarlet fever, and diphtheria. Owing to certain recent changes as well as to the fact that

their full benefits are not being taken advantage of, makes this subject, I believe, most timely, for regardless of the branch of medicine followed, we are all, by the very character of our profession, obligated to preach the gospel of better health.

An erysipelas toxin capable of producing active immunization is not yet available. Yet this has been shown feasible by Birkhaug. It can be demonstrated by means of skin tests that the active immunity conferred by an attack of erysipelas is gone in about six weeks. The importance of Birkhaug's announcement therefore lies principally in the prevention of recurrence. And I believe many of you will agree that the care and treatment of a case of recurrent erysipelas can prove most trying.

There has been some reports recently that would tend to indicate that erysipelas antitoxin is not all that it should be. These reports, however, I believe should be discounted. Any unsatisfactory results are usually due to an initial delay in the administration of the first dose, and a failure to repeat with a second and perhaps a third, or even a fourth dose, at eight to twelve hour intervals. The importance here lies in the shorter duration (these cases are discharged at the end of a week).

The need for energetic treatment is evidenced by the mortality tables:

Between 5 years and 50 years.....	4 %
Before 5 years.....	11.5%
After 70 years.....	25 %

Concerning the scarlet fever preparations, when they were first offered to the profession it was the opinion of many that they were analogous in all respects to the diphtheria preparations. This is by no means the case, as I believe that it is yet to be proven that the naked toxin used to effect an active immunization produces an immunity of any high state. And from a public health standpoint it also has the objections of having to be given in five separate doses and the possibility of untoward reactions. It also seems worthy of mention that some of these toxins offered to us with much apparent assurance have been suddenly ordered off the market to be returned to the pharmaceutical house in order to effect some change. Furthermore, some observers now doubt if we have a true toxin elaborated by the scarlet fever streptococcus, claiming that there is much evidence that the toxin filtrate is more in the nature of a tox-allergen and that the phenomena of desenti-

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

zitation places a most important role in scarlet fever. And, as a result of these views, there is now being placed on the market a re-inoleated antigen, which contains, in addition to tox-allergen, the antigenic components of the whole organism. It is, however, too early to offer an opinion on this antigen.

As far as the antitoxin is concerned its use from a prophylactic standpoint is not justified because no assurance can be given that an adequate passive immunity can be secured. However, from a curative standpoint the safe procedure is to always use it and above all, use it early. It is said by some that the slightly sick patient does not receive sufficient benefit to warrant its use. Granting this to be true, there is a fair number of cases that are apparently, but slightly sick that later, in the course of the disease, develop complications, and it is then impossible to turn the clock back and give the patient the advantage of having the antitoxin at the onset. The idea of the early administration is, of course, to check the toxemia during its period of increase. The proper use of the antitoxin diminishes the possibility of complications, and this "proper use" necessitates a repetition of the first dose if sufficient improvement has not followed within forty-eight hours. I might well remark here that in late cases with faded rash little, if any, benefit may reasonably be expected from antitoxin therapy.

As to diphtheria, so far as the production of an active immunization is concerned the problem differs somewhat from both of the conditions already mentioned. We can now produce an active immunity safely and with assurance. Toxin-antitoxin mixture given in three doses with intervals of five to seven days will after a period of a few months produce an immunity which promises to be of a lasting character. There is also a diphtheria toxoid on the market which having no serum obviates the possibility of an anaphylaxis on the subsequent use of the specific serum for some other condition. The toxin-antitoxin mixture, however, has its serum origin from the goat and any later use of horse serum would, of course, not be specific. Another advantage claimed for the toxoid is that the immunity is developed in a few weeks, rather than from one to six months.

I would also like to caution against the false security of a Schick Test. A public health nurse, in my opinion, is by no means qualified to judge the reaction of a Schick Test, but whether negative or positive, we should proceed to effect an active immunization because a patient's negative reading to a Schick Test may at any time become positive. It is my practice to give to all children starting at two years of age the immunization disregard-

ing altogether the Schick Test. My reasons, aside from the fact that it is a simple and safe procedure, and that the greatest susceptibility lies between the ages of two and five, are at once apparent when a study is made of the mortality of the disease. Vis: The following table of fourteen thousand six hundred and eighty-eight (14688) deaths in New York in ten years was tabulated by Billington:

Under one year.....	1,214
From one to five.....	9,622
From five to ten.....	3,212
From ten to fifteen.....	311
Over fifteen	329
—————	14688

In one thousand deaths due to diphtheria 20 per cent occurred in children of less than one year of age; 25 per cent between one and three years; 62 per cent of all deaths occurred before the age of five.

Permit me to emphasize that the greatest susceptibility lies between the ages of two and five years, and that sixty-two per cent of all deaths occur prior to the fifth year. Yet it is only a very small minority of children that are given an active immunization before the school age is reached, which is, of course, after the fifth year.

Concerning the diphtheria antitoxin, all agree that if given early, we ought seldom, if ever, lose a case. Just a word of caution—when one has a case he believes to be diphtheria, the antitoxin should be given immediately being sure that enough is given (for the dose is not measured so much by the size and age as by the amount of toxin to be overcome). And then culture the throat—when possible avoid losing the time necessary to incubate the culture.

CONCLUSIONS

1. An erysipelas toxin capable of producing active immunization has been shown feasible.
2. Poor results when using erysipelas antitoxin usually due to delay in administration or to underdosage.
3. Scarlet fever preparations are not analogous to diphtheria preparations.
4. Scarlet fever toxin not practical from Public Health standpoint.
5. Scarlet fever antitoxin is safe and lessens likelihood of complications.
6. Diphtheria toxin-antitoxin mixture or diphtheria toxoid should be used universally and should be administered at about two years of age, rather than waiting for school age.
7. Diphtheria antitoxin is one of the physician's most effective weapons.

THE JOURNAL

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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THE PELLAGRA PREVENTIVE ACTION
OF CANNED SALMON

In connection with studies relating to the pellagra preventive properties of various food substances the United States Public Health Service has recently announced that canned salmon (Alaska ehum) contains the pellagra preventive factor. By reason of its potency in preventing pellagra and its availability in the preserved state, salmon may be considered a fair substitute for meat in the area of pellagra endemicity where meat is not readily available. The demonstration of the pellagra preventive value of canned salmon furnished further evidence of the soundness of the working hypothesis that black tongue in dogs is the analogue of pellagra in man.

Editorial

THE FORT SMITH MEETING

At the annual meeting of the Arkansas Medical Society held in Fort Smith, May 6, 7, and 8, Dr. E. E. Barlow of Dermott automatically became president, having been elected president-elect the previous year, and Dr. D. A. Rhinehart of Little Rock was elected president-elect. The introduction to our readers of the new president will be found in the July issue of the Journal, and the new president-elect will be introduced in like manner at a later date. Dr. Rhinehart is the author of a new textbook on x-ray technic which was reviewed in our April issue.

Other officers elected are:

First Vice-President, Wm. H. Mock, Prairie Grove; Second Vice-President, H. B. Hardy, Greenbrier; Third Vice-President, J. B. Ellis, Helena. Councilors: Second District, L. T. Evans, Batesville (re-elected); Fourth District, H. T. Smith, McGehee; Sixth District, C. A. Areher, DeQueen (re-elected); Eighth District, M. E. McCaskill, Little Rock; Tenth District, S. J. Wolfermann, Fort Smith (re-elected).

The attendance at the Fort Smith meeting was very gratifying, more than one-third of the entire membership in the State being registered, with more than 100 of the Woman's Auxiliary attending. A detailed report of their meeting and the entire proceedings of the State Society will be published in the July issue.

Texarkana was selected for the 1931 meeting, the invitation having been extended by Dr. L. J. Kosminsky of that city. All the invited guests were present at the meeting and the papers they offered were excellent from every viewpoint. They added greatly to the interest in the program and were an important factor in the success of the meeting.

The memorial service for the honored dead who were taken during the last fiscal year was unusually impressive, solemn and beautiful. It was, indeed, a feature of the convention. It was held in the First Presbyterian Church and the members of the Woman's Auxiliary joined with us in the service. The music was very beautiful and appropriate and was rendered under the leadership of Fort Smith's gifted and sweet voiced soprano, Mrs. H. H. Smith. Her rendition of the solo, "Face to Face," was so full of expression that it gave the entire audience an emotional thrill.

Following a brief talk by the Reverend Dr. Carleton D. Lathrop, rector of St. John's Episcopal Church, the principal address was given by Dr. F. Vinsonhaler of Little Rock. The occasion will long dwell in the memories of all present.

HOUSE OF DELEGATES

At the meeting of the House of Delegates the Arkansas Basic Science Law, passed by the last Legislature, received unqualified indorsement. The Student Loan Fund was ordered discontinued. The annual dues were raised from \$3.00 to \$5.00 per annum. The report of the secretary was decidedly favorable, showing a further increase of membership, and the income from THE JOURNAL showed a gain over all previous reports.

Unqualified praise must be accorded the Fort Smith physicians for the splendid entertainment and the general arrangements which made the meeting so eminently successful. Their activities were headed by Drs. Buckley and Foltz and they were admirably assisted by Drs. Goldstein, Brooksher, Hoge, Smith, Jones, Foster and others, all of them important factors in the plans.

A MATRIMONIAL EPISODE

On Wednesday night, at about eleven o'clock when the activities were at their height, the announcement of the marriage of Dr. Allan A. Gilbert, one of our members, was a surprise which almost upset the regular program. At 1:00 a. m., those who had not retired, left the Goldman Hotel where the entertainment was given (we are told) for a grand celebration in honor of the newly weds.

The report of the Woman's Auxiliary and the election of officers, is not available for this issue but, as already stated, it will appear in a later issue of the Journal.

To our host and the manager of the Goldman Hotel, Mr. John England, the Journal, on behalf of all who attended the meeting, extends the warmest praise and appreciation of the many courtesies extended, all of which still further places us in the debt of Fort Smith.

Plans for the 1931 convention at Texarkana will begin at once and we hope for and expect another instructive and successful meeting there.

Abstract

BONE-GRAFT OPERATION FOR TUBERCULOSIS OF SPINE

Fred H. Albee, New York (Journal A. M. A., May 10, 1930), reviews and summarizes his experiences in the treatment of 856 cases. In only 6 per cent was the observation period less than one year; in 63 per cent it was from one to five years, and in 31 per cent it was from five to nineteen years. Preoperative complications were present in 286 cases (33 per cent.) About half of these were abscesses or sinuses in various regions. In 32 per cent there were symptoms and signs of pressure on the cord, which had usually progressed to paraplegia or other forms of paralysis. Tuberculosis of the lungs or of other joints was present in 16 per cent. In one case a spinal graft, inlaid by another surgeon, had fractured. In 90 per cent of the cases the result was classified as excellent or good. In many of these the patient told of doing such hard work as heavy lifting and scrubbing, or of indulging in riding, tennis and swimming. In a few there were mild complaints of fatigue after the day's work or of occasional distress in the back. In the cases classed as good, there was still some mild reminder of the disease, but there was no noteworthy incapacity. In the cases in which the patient was as strong and active as if he had never been ill, the result was classed as excellent. In sixty-nine cases, 8 per cent, the result was classed as fair, since the patient complained of moderate pain at times or was not able to do more than light work or indulge in active exercises without restrictions. Seventeen patients died, three of them during convalescence. Four of the seventeen deaths occurred in the complicated cases. The percentage of excellent or good results, 89, shows that, although the presence of complications naturally militates against the success of the operation, one may still hope for cure in a large majority even of these serious cases.

Personal and News Items

Dr. L. Gardner has moved from Fort Smith to Russellville.

Dr. S. C. Plummer, Chicago, Chief Surgeon of the Rock Island Railroad was a recent visitor to Little Rock.

MARRIED—Miss Esther Fenlon and Dr. Allan A. Gilbert, both of Fayetteville, were married in Fort Smith, May 7, 1930.

The April issue of the Texas State Journal of Medicine contains an interesting article on "Radiological Studies of Simple Fractures," by Preston Hunt, Texarkana.

The Co-operative Clinic on Fractures has invited Dr. F. Walter Carruthers of Little Rock to assist in their exhibit to be held in Detroit, during the meeting of the American Medical Association, June 23, 1930.

The State secretary positively cannot accept dues from a member direct, except the member so paying has in his possession the written authority of the county secretary to do so.

Dr. Thomas B. Sellers of New Orleans, presented a paper before the Pulaski County Medical Society, April 28, on "The Treatment of Nausea and Vomiting of Pregnancy and Eclampsia, with Lantern Slides."

Volume XXVI, Number 12. Again we come to the end of the Journal year, and in this issue we give an index of what has been accomplished.

Dr. B. A. Rhinehart of Little Rock won the Dewell Gann cup, given for the high score in golf, at the annual meeting of the Arkansas Medical Society in Fort Smith. Dr. Rhinehart made a net score of seventy, just nosing out Dr. K. W. Cosgrove, Little Rock, who had a net of seventy-two.

May 1, 1930, the Auxiliary entertained the Pulaski County Medical Society at the home of Dr. and Mrs. W. L. Sadler, Little Rock. The guests were presented with small hats as

favours and a radio program of jokes on the guests were given. Miss Marion Owen gave two humorous readings and Claude Kennedy's orchestra played throughout the evening. A delicious plate supper was served late in the evening with Mrs. J. B. Crawford, chairman.

HAVE YOU PAID YOUR DUES FOR 1930—Technically, all who have not paid their dues by this date are non-members. As a matter of fact three or four county secretaries have not yet turned in their annual reports. Therefore, there are a few who have paid who may cure such a discrepancy on their membership records by insisting on their respective secretaries paying up and see that their dues are sent immediately to the secretary of the State Society.

The eighty-first annual session of the American Medical Association will be held in Detroit, June 23-27. The House of Delegates will hold its meetings at the Hotel Statler. The sections of the Scientific Assembly will meet in the beautiful halls of the Masonic Temple. The Clinical Lecture Program, on June 23 and 24 will be given in the auditorium of the Masonic Temple on Monday afternoon and in the morning and afternoon on Tuesday. The Scientific Exhibit, larger than ever, will be housed in the Masonic Temple. The Technical Exhibits and the Registration Bureau will also be in the Temple. Thus all official meetings and exhibits will be under a single roof except the meetings of the House of Delegates. Railroads offer special rates—one and one-half fare—to those who will secure return certificates when "going" tickets are purchased and will have these certificates certified and validated at the Registration Bureau. Detroit hotels are filling up, so make your reservation at once through Dr. William C. Lawrence, Chairman Hotel Committee, 1805 Stroh Building, Detroit. There will be a large attendance, a fine program and hospitality of the Detroit kind—the most gracious.

COFFEY-HUMBER METHOD FOR CANCER

The remarkable publicity accompanying the introduction of the Coffey-Humber method for the treatment of cancer passed briefly into a quiet phase, leaped upward with the eastward jaunt to the congressional hearing again became quiescent for a few weeks, and

burst forth last week in a Sunday supplement feature. In the meantime pathologists, surgeons and other conoseenti who have investigated the method express nothing but profound disappointment with both the clinical and the pathologic results. These experts indicate that postmortem examinations, which have been made in at least thirty cases, do not reveal any definite specific destruction of cancer tissue or evidence that the progress of the spread of cancer in the bodies of the afflicted patients has been retarded. Several clinicians who have watched the results closely affirm that the patients have been relieved of pain after the first one or two injections, but that it usually requires more opiate thereafter to control the pain. These observations are obviously what might be anticipated in any new method of treatment of cancer. Perhaps it may not require the five years emphasized by Geschickter as the limit of time for the determination of the virtue of any new method of treatment of cancer to indicate that this method is not what was earnestly hoped for when it was first presented. Should the failure be complete, the disappointment of the profession will be as great as, if not greater than, that of the proponents of the method.

—Jour. A. M. A., May 3, 1930.

WHAT THEY THOUGHT OF THE FORT SMITH MEETING

(R. J. CALCOTE)

Dr. E. E. Barlow, Dermott—"I thought the Fort Smith meeting was splendid in point of program and entertainment. The place of meeting as regards acoustics and disturbance from without was quite bad. I mention this because it is unfair to the speaker, and a program ever so good can be rendered worthless by poor acoustics and noise from without. I want to say that I believe the benefits received by those present justified the expense of the moving pictures presented."

Dr. Thad Cothorn, Jonesboro—"This was one of the best, if not the best, meeting of the State Society that we have yet had, and it would be pretty hard to find fault with it. However, we think it would be much better to have the meeting, the scientific and commercial exhibits and registration booth in close proximity. The use of slides and motion pictures are with us to stay and a place should be tested out in advance of the meeting so

that it can be suitably darkened and focused to make the exhibits of the slides and pictures easily and comfortably readable."

Dr. D. A. Rhinehart, Little Rock—"To tell what I thought of this meeting in twenty-five or thirty words—impossible! A golden key to a friendly city; excellent hotel accommodations; a well-balanced and interesting scientific program; unsurpassed entertainment features; all the old and a host of new friends! How could it be other than the best meeting I have ever attended?"

Dr. R. H. T. Mann, Texarkana—"Your programs are wonderful, really a post-graduate medical course. We hope to have a fine one next year in Texarkana."

Dr. Thos. Douglass, Ozark—"Fort Smith meeting unexcelled. Scientific program of high order. Entertainment and hospitality delightful. Memorial service notable. Dr. Liseher's addresses and papers of Dr. Davis and Dr. Sachs much enjoyed. Desirable: More discussion and friendly controversy."

Dr. Dewell Gann, Sr., Benton—"One of, if not the best, we have had in forty years. I thank you boys for the well balanced program you gave us."

Dr. M. E. McCaskill, Little Rock—"The Fort Smith meeting was the best I have attended. The scientific program was excellent and well arranged. If there is to be any criticism one might suggest that there was too much on the program the second day. The Fort Smith doctors and their friends have mastered the art of entertainment. When it came time to depart I felt that it was all too soon and I hope we may have the pleasure of returning there in the near future."

Dr. J. C. Gilliam, Des Arc—"I enjoyed the meeting and believe it was a success. The arrangement of the scientific program was just to suit my idea. Lantern slide demonstrations conveyed the real pathology that could not be conveyed otherwise. Our meetings are getting better as we progress in scientific medicine."

Dr. W. A. Snodgrass, Little Rock—"I am sure the Fort Smith meeting was the best I ever attended insofar as the scientific papers and program was concerned. The committees failed to do their duty in many instances due to the urgency of politics that some members were more vitally interested in than the meeting and scientific work."

Dr. S. W. Douglas, Eudora—"The Arkansas Medical Society is of a composite membership, a large majority of which are classified as General Practitioners. The meeting was largely one of Specialists. With my limited acquaintance with the essayists, I compute 19 papers by specialists, 14 by general practitioners and one layman. Many papers, e. g. Blood Typing, were entirely too technical for discussion. The meeting was exceedingly enjoyable and very instructive. Your move to get the reaction of the members to the meeting is a very adroit diagnostic procedure and may result in applying some effective therapeutic measures to some of the ills of the Society."

Dr. J. B. Jameson, Camden—"For fellowship and entertainment the Fort Smith meeting was above par—in fact a "birdie." Especially were the out of State men good, and Liseher was a whole show by himself."

Dr. L. T. Evans, Batesville—"This is the 20th meeting I have attended in succession, and I think the Fort Smith meeting the best I have attended. The Fort Smith doctors and their wives entertained us first class. The scientific program was excellent."

Dr. William E. Jones, Little Rock—"I certainly enjoyed every minute of our meeting at Fort Smith. Being back with the doctors of Fort Smith and Sebastian County was a downright pleasure, and they are to be commended for their program and entertainment, which I must say was one of the best we have ever had."

Dr. W. G. Hodges, Malvern—"The Fort Smith meeting was one of the best. The programs were unexcelled in interest and importance. The Fort Smith physicians went over the top in their hospitality and entertainment for the visiting physicians and their wives."

Dr. H. R. McCarroll, Walnut Ridge—"The Fort Smith meeting was in a good many ways a commendable meeting, but I think that it would be much better to have a couple of good lectures than to give over one entire evening to a dance when only a few people are interested. I believe there should be more papers from the average physician."

Dr. T. G. Porter, Hazen—"Have been attending the Arkansas Medical Society for a period of twenty years and consider the one just held in Fort Smith one of the best. The

program was constructive and highly educational."

Dr. O. R. Kelly, Sheridan—"The general program enjoyed better than any I ever attended. The short practical papers having ideas that we can put into practice is what appeals to the average doctor. Two or three minute discussions, with two minute intermissions between papers stimulates interest."

Dr. G. B. Fletcher, Hot Springs—"Thought the program excellent. Believe that each man preparing a paper should be notified that the time limit for reading it will be twenty minutes. This already is the rule, but many do not know it. There should be an opportunity to discuss or ask questions about a visitor's paper."

Dr. E. H. Hunt, Clarksville—"The Fort Smith meeting was fine. Entertainment better than in years before. The scientific program very good. The idea of having outstanding visitors is above reproach. The program committee should by all means send a man who intends to write a paper a written set of instructions on writing papers to be read before a bunch of medical men. We have a By-Law that no paper will be allowed to be continued longer than twenty minutes."

Dr. J. M. Lemons, Pine Bluff—"Entertainment—Good. Three cheers for Fort Smith. Scientific Program—First class from start to finish. Hats off to the chairman and his committee."

Dr. P. H. Phillips, Ashdown—"I think the Fort Smith meeting was a very successful meeting from every viewpoint."

Dr. B. H. Hawkins, Mena—"I think the Fort Smith meeting one of the best meetings I have ever attended."

Dr. J. B. Ellis, Helena—"I enjoyed every minute of the meeting. The Fort Smith people were certainly nice to us. The program was something for everyone. I know that as a general practitioner I was much benefited. I would not have missed it for anything. Those that did certainly missed a treat."

Dr. J. H. Fowler, Harrison—"The program was well arranged. The building in which the meeting was held was not up to the average. The entertainment was fine—especially the dancing by Misses Dolores Pharr and Martha Anna Green."

Dr. M. L. Norwood, Lockesburg—"The Society feels grateful to the program committee and doctors of Fort Smith for the program and entertainment. The meeting was satisfactory in every way. Acoustics of Hall not good."

Dr. John M. Proctor, Hot Springs—"To my mind the Fort Smith meeting was the best the Arkansas Medical Society has ever held. The scientific program was outstanding. All the papers were timely and instructive. The interest manifested was greater than I have ever seen before. It was indeed a three day intensive post-graduate course."

Dr. O. G. Hirst, Prescott—"I think the meeting was a great success in every respect. The only criticism I have to offer was that the auditorium was small and acoustics poor, making it difficult to hear the speaker unless very close to the front. I think the program was good and think all who attended were well pleased, at least I was."

Dr. J. S. Wilson, Monticello—"I regard the Fort Smith meeting as being very good. I was especially interested in the scientific program, and think most of the papers were of high class and instructive."

THE JOHN PHILLIPS MEMORIAL PRIZE

The American College of Physicians announces the JOHN PHILLIPS MEMORIAL PRIZE of \$1,500.00, to be awarded for the most meritorious contribution in Internal Medicine and sciences contributing thereto, under the following conditions:

(1) The contribution must be submitted in the form of a thesis or dissertation based upon published or unpublished original work.

(2) It must be mailed to the Executive Secretary of the American College of Physicians on or before August 31, 1930.

(3) The thesis or dissertation must be in the English language, in triplicate, in type-written or printed form, and the work upon which it is based must have been done in whole or in part in the United States or Canada.

(4) The recipient of the prize would be expected to read the essay at the next Annual Meeting of the College, after which he would be officially presented with the prize by the President.

(5) The College reserves the right to make no award of the prize if a sufficiently meritorious piece of work has not been received.

ANALYSIS OF THE ARKANSAS BASIC SCIENCE LAW

Organization of Boards:

Title: Board of Examiners in Basic Sciences consisting of Superintendent of Public Instruction and five others appointed by the governor. "No member to be actively engaged in the practice of the healing art nor a member of the faculty of any medical school." Six year term.

Preliminary Requirements:

1. Age 21.
2. Proof of good moral character.
3. High School graduate.

Subjects Included:

Anatomy, bacteriology, chemistry, physiology and pathology.

Examination:

Time—discretionary with board. Fee \$10.00. \$5.00 for re-examination within twelve months. Grade, 75 per cent in all subjects. If below 75 per cent in more than one subject, must wait a year to be re-examined.

Act Does Not Apply to:

1. Dentists, nurses, midwives, optometrists, chiropodists, barbers, cosmeticians or Christian Scientists.
2. Nor to persons licensed to practice the healing art in Arkansas when the act takes effect.
3. Nor to persons specifically permitted by law to practice without licenses, practicing within the limits of their license.
4. Nor to sale or manufacture of drugs, medicines, household remedies provided vendor or maker refrains from any attempt to diagnose.

Reciprocity Arrangements:

When applicant has passed an examination in the Basic Sciences before a Board of Examiners in Basic Sciences or professional board whose requirements are equal to Arkansas' and which State accords like exemptions to Arkansas licentiates.

Citation to State Statute:

Acts of Arkansas, 1929. Act No. 147.

Note

Act requires secretary of each professional board annually to send a list of that year's licentiates to Secretary of State who then sends out such lists to the sheriff of each county and prosecuting attorney of each district.

Obituary

SMILEY, JOHN LEWIS—Dr. J. L. Smiley of Siloam Springs died April 15, 1930. Aged 55. He had been a resident of Siloam Springs since 1911, and for years a member of the Arkansas Medical Society. He was born at Springdale where he completed his high school training and later graduated from the University of Tennessee in 1896. He started practicing medicine at Robinson, but seven years later moved to Bentonville.

June 2, 1894, Dr. Smiley was married to Miss Ruth Webster of Elm Springs. Three children were born, Mrs. Diva Freeman of Siloam Springs, Barnette Smiley of Tulsa, Okla., and Miss Opal Bellamy of Chicago. He was a veteran of the World War, having entered the service in June, 1917, and was stationed at the hospital at Camp Logan until November, when he sailed for France.

GREENE, JAMES LEON—Dr. J. L. Greene of Hot Springs died April 21, 1930. Aged 68. He was stricken while addressing members of the Arkansas Construction Commission at the Hotel Marion, Little Rock. Death was attributed to heart disease. Dr. Greene was appointed a member of the Commission August 3, 1929, by Governor Parnell, and had given much of his time to the plans for the new State Hospital for Nervous Diseases.

Dr. Greene was superintendent of the State Hospital for Nervous Diseases at Little Rock from 1911 to 1914, after which time he moved to Hot Springs.

Dr. Greene is survived by his wife, a son, John, of Cleveland, Ohio, and a daughter, Margaret, of Hot Springs.

VILLARS, HORACE F.—Dr. H. F. Villars of Little Rock died April 24, 1930. Aged 60 years.

Dr. Villars was graduated from the College of Physicians and Surgeons in Little Rock in 1911, and since that time has practiced medicine in Little Rock. He served as deputy coroner under the late Dr. S. P. Vaughtner and had been visiting physician at the Missouri Pacific Hospital. He is survived by his wife, one sister, Mrs. Carrie Pletzer of Clarksville, O.; three brothers, William Villars of Clarksville, O.; J. O. Villars of Wilmington, O., and Charles Villars of St. Paul, Minn.

RESOLUTION

On the death of Dr. Edward Meek, which occurred April 10, 1930.

Mr. President and fellow members of the Pulaski County Medical Society. Dr. Edward Meek, our friend and honored associate, after a long and useful career among us has paid the last debt of nature.

Dr. Edward Meek, had been a member of this society for almost fifty years. During his active life as a physician, he was always honored and respected by his associates as the highest type of an ethical physician. It was always a pleasure to be associated with him professionally. He never asked or expected personal aggrandizement. He was always agreeable under all circumstances, in his relation with his brother physicians. He gave unstintingly of his professional talents and energy, especially to the younger men coming up in the medical profession.

He always responded to every call of the sick or injured without question of personal remuneration. His field of activity covered a large territory, going many miles into the country. He always responded to these hardships of his profession, without complaint. He was a Christian gentleman of the highest class, honored and loved by his Church and Sunday School Class and associates. He loved the fellowship of his fellowman.

We feel that the Society has lost one of its brightest stars, in the galaxy of distinguished men, who have been its members. The community one of its best citizens.

We, extend our sympathy to the bereaved wife, upon the loss of a loving husband, to the children, the loss of a kind and understanding father.

Respectfully submitted,

Wm. A. Snodgrass,

Jas. H. Lenow.

W. H. Miller.

County Societies

BRADLEY COUNTY

(Reported by W. T. FIKE, Sec.)

The Bradley County Medical Society met in Warren, April 7, and held an all day clinic on bone and skin diseases. Dr. F. Walter Carruthers and Dr. Geo. F. Jackson of Little Rock were guests of the Society.

Lunch was served at the Southerland Hotel.

Present: Wilson and Frizell of Banks; Reasons of Hermitage; John Wilson of Monticello; Hartsell, Ellis, C. N. Martin, Ellison, Crow and Fike of Warren.

CRAWFORD COUNTY

(Reported by ODELL J. KIRKSEY, Sec.)

The Crawford County Medical Society met in Van Buren, March 27, 1930, and elected the following officers: President, J. M. Stewart, Van Buren; Vice-President, Q. R. Galloway, Mulberry; Secretary-Treasurer, Odell J. Kirksey, Mulberry; Delegate to State Meeting, J. A. Wigley, Mulberry; Alternate, M. S. Dibrell, Van Buren.

The Society held its annual banquet in the Blue Dragon Tea Room, Van Buren, April 24. Members present, Dibrell, Stewart, Bennett, Reeves, Wigley, Galloway and Kirksey; visitors, Holt, Hoge, Foltz, Moulton, Sr., Moulton, Jr., King, Billingsley, Griffin, Kroek, Brooksher, Goldstein, Smith, Dorente, Wolfmann, of Fort Smith and Douglas of Ozark.

DESHA COUNTY

(Reported by W. B. GRAYSON, Sec.)

The regular meeting of the Desha County Medical Society was held at the Greystone Cafe, McGehee, April 22, at 7:00 p. m. Dr. V. McCammon, President, presiding.

Dr. E. E. Barlow, Dermott, President-Elect of the Arkansas Medical Society made a short talk.

The scientific program was as follows:

Paper on Pediatrics by Dr. Morgan Smith, Little Rock.

Case Report by Dr. W. B. Grayson, McGehee. Discussion opened by Dr. Isom, Dumas.

"Urologic Conditions," by Dr. J. E. Butts, Helena. Discussion opened by Dr. H. F. H. Jones, Little Rock.

"X-Ray Findings in Negro School Children, With Case Report," by Dr. H. T. Smith, Me-

Gehee. Discussion opened by Dr. J. C. Miller, McGehee.

"Acute Abdomen," by Dr. G. V. Lewis, Little Rock. Discussion opened by Dr. E. P. McGehee, Lake Village.

"Case Report," by Dr. W. H. DeClark, McGehee.

"Blood Chemistry," by Dr. M. J. Kilbury, Little Rock.

Book Reviews

The Basis of Epilepsy—By Edward A. Tracey, M. D. (Harvard) Director of Epileptic Clinic at Forsyth Dental Infirmary, Boston. Illustrated. Published by Richard G. Badger, The Gorham Press, Boston. Price, \$2.00.

The first part of this book reports investigation of chronic epilepsy, major mal cases, revealing the white spots of epilepsy and the various abnormalities of the vasoconstriction reflexes. The second part deals with incipient epilepsy, and the third part presents a method for diagnosing epilepsy between seizures and other valuable information.

The Treatment of Skin Diseases.—By Noxon Toomey, M. D., B. A., F. A. C. P., Late Instructor in Dermatology, St. Louis University, Major and Surgeon, 138th Infantry, Mo. N. G. Published by The Lister Medical Press, Lister Bldg., St. Louis, Mo. 1930.

This book includes a description of the treatment of all known skin diseases, in a form originating in his own experience. His remarks on etiology, pathology and clinical course are included only when needed to elucidate prognosis.

The Normal Diet—A simple Statement of the Fundamental Principles of Diet for the Mutual Use of Physicians and Patients. By W. D. Sansum, M. S., F. A. C. P., Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, California. Third Revised Edition. Published by The C. V. Mosby Company, 1930. Price, \$1.50.

The author of this book is of the opinion that diet errors are responsible for many ailments, and for that reason he presents the fundamental principles underlying the selection of a normal diet, which undoubtedly fills a very definite need.

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WM. R. BATHURST, *Editor*

Little Rock, Ark.

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